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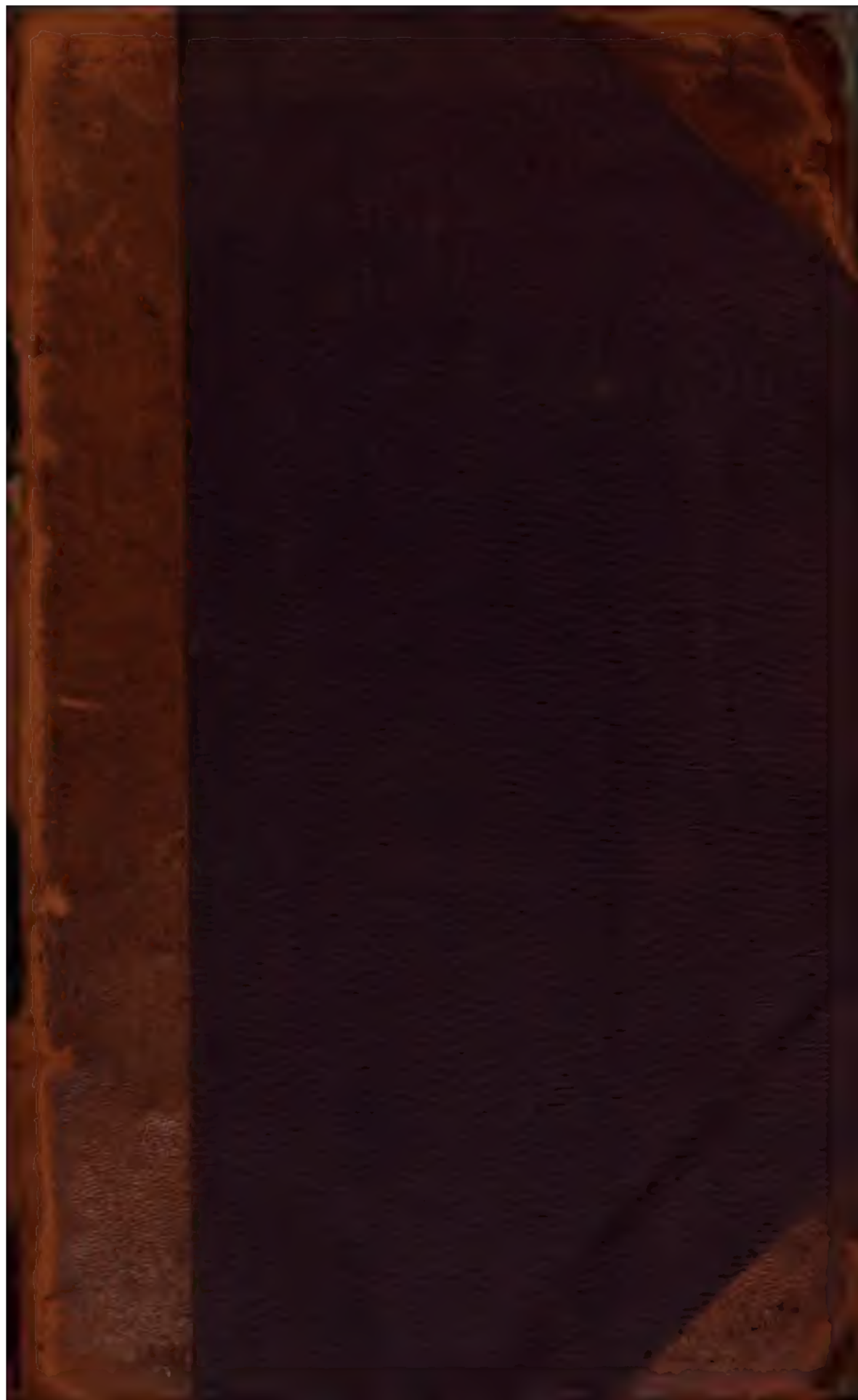
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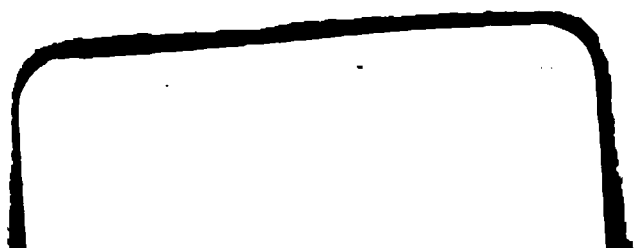
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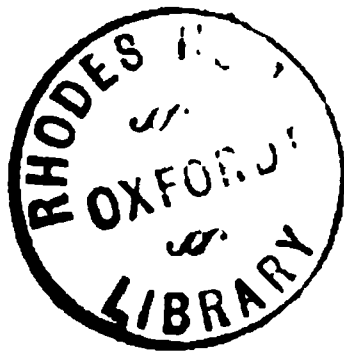
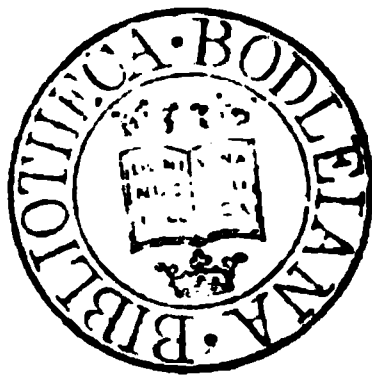
BY ZADOCK THOMPSON.



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1853.

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PRELIMINARY REMARKS.

A little more than ten years have now elapsed since the publication of my Natural, Civil and Statistical History of Vermont. In that work I endeavored to collect and present as concisely and clearly as I was able, and, at the same time, as fully as the state of knowledge and my prescribed limits would permit—

I. An account of the Natural History of the State, embracing its physical geography, zoology, botany and mineralogy.

II. The Civil History of the State, comprehending the settlement of the territory, the organization of the government, and the progress of legislation and improvement, together with a full account of the controversy with New York, the negotiations with the British in Canada, and of our various political, literary and religious institutions.

III. A Historical and Statistical Gazetteer, embracing a full account of all the counties, towns, streams, &c., in the State, arranged in alphabetical order.

Since the publication of that work, rail roads and the magnetic telegraph have been introduced into the State, and very considerable changes have taken place. A Geological Survey of the State has been commenced, but was discontinued, without any full publication of the results; in consequence of which, the greater part of the discoveries made and the facts elicited, have been lost to the State and the world; while a very small additional appropriation in 1847, would have secured to the State a Final Report on the Geology of Vermont, which would have been not only creditable to the State Geologist, but an honor and treasure to the State. But notwithstanding the loss, which has been occasioned, by this penny wise and pound foolish policy of the legislature, our general knowledge of the geology, and of the mineralogical productions of the State, has been greatly enlarged by the information elicited and made public during the continuance of the survey.

During the last ten years, I have spent a large portion of my time in collecting and preserving facts in relation to the natural and civil history of the State, thinking that the time might possibly come, when I should be warranted in the publication of a new and improved edition of the whole work. But the new materials having largely accumulated, and the number of copies of the original work, on hand, being such as to afford no encouragement for a speedy republication of the entire work, I concluded to select some of the principal items into the form of an Appendix, which might be bound with the remaining copies of the original work, and also be bound separately for those who already have the original work and desire the Appendix.

The matter of the Appendix will be found, to belong almost entirely, to the department of Natural History. This is not owing to any lack of materials for making additions to the other parts, but because those materials could not be so conveniently used in their separate condition. Additions to a work of this nature

PRELIMINARY REMARKS.

are, necessarily, fragmentary; and to be used advantageously, they must be incorporated by re-writing the whole. But as this could not be done without reprinting the whole, I have selected, for the Appendix, such materials as I thought would be most interesting and useful in their separate state; and these, for the most part, relate to Natural History.

Since the publication of my work in 1842, much light has been thrown upon the early history of our State by the antiquarian researches of Henry Stevens, Esq., and facts have been developed, which remove the mystery from certain transactions in our revolutionary struggles. But the introduction of these matters into the Appendix would require a repetition of much of the history of that period, to make it intelligible, and, consequently, more room than can be spared for it.

The history of our legislation during the last ten years, if fully written, would furnish an interesting and instructive chapter; but that, too, is excluded for the want of room. Perhaps the most important acts of legislation within the time, are those which relate to schools and the sale of alcoholic liquors. But, these several acts have not yet been fully tested by experience. The general school law of 1845, appeared to have been drawn with much care, and to promise an efficient provision for the advancement of primary education in the State, and it is to be regretted that it had not been more fully tested, before it was mutilated by repeals and additional enactments; and was violated by the body which enacted it, by their neglect to appoint a State Superintendent of Schools. But in spite of all obstacles, I am happy in believing that the cause of education is advancing, and that one of the most efficient causes of this advancement in our large villages, is the establishment of Union Schools. These schools furnish to the children of the poor the same advantages which are enjoyed by those of the rich, for pursuing the higher branches of study, and thus afford a universal stimulus in all the classes in the several schools, which form the union.

To almost every article in the Gazetteer, alterations and additions might be made, but, for the reasons already stated, it was deemed inexpedient. If life and health should be spared for a few years longer, it would afford me much satisfaction to re-write the whole work, and, by incorporating in it the additional material, make it more worthy of the approval and patronage of my fellow citizens, but, as the great expense would preclude me from the possibility of being able to publish a new edition, that satisfaction is not likely to be realized.

Z. THOMPSON.

Burlington, April 9, 1853.

THOMPSON'S VERMONT.

Part First.

NATURAL HISTORY OF VERMONT.

CHAPTER I.

DESCRIPTIVE AND PHYSICAL GEOGRAPHY OF VERMONT.

SECTION I.

Situation, Boundaries, Extent and Divisions.

Situation.—Vermont is situated in the northwestern corner of New England, and lies between the parallels of $42^{\circ} 44'$ and 45° of north latitude, and between $3^{\circ} 35'$ and $5^{\circ} 29'$ of east longitude from the Capitol of the United States at Washington, or between $71^{\circ} 33'$ and $73^{\circ} 25'$ of west longitude from Greenwich Observatory.* The most eastern extremity of

* Where it is not otherwise specified, the longitudes given in this work are in all cases reckoned from the Capitol of the United States. The longitude of the Capitol from Greenwich, according to the most recent observations, is $77^{\circ} 1' 48''$. It is very much to be lamented that the longitude of places in Vermont is so imperfectly known. We are not aware that a single point within the state has been determined with any pretensions to accuracy. True, a few solar eclipses have been observed and some calculations have been made, for the purpose of deducing from them the longitude of the places; but the only observations within our knowledge, which have hitherto been regarded as entitled to any degree of confidence, were those of the solar eclipses of 1811, made at Burlington by Prof. James Dean and John Johnson, Esq., and at Rutland by Dr. Williams. The longitude of the University of Vermont, deduced from these observations by Dr. Bowdich, was $73^{\circ} 14' 34''$, and of Rutland court house $72^{\circ} 57' 27''$ west from Greenwich observatory, and in accordance with these has the longitude of the different parts of the state been laid down upon our maps. In 1838, the author prepared, with much care, for observing the large solar eclipse of that year, for the purpose of determining

Vermont is in the township of Canaan, and the most western in the township of Addison. This state lies nearly in the middle of the north temperate zone. The longest day at the south line of the state, is 15h. 9m. 9s., and at the north line, 15h. 25m. 50s.

Boundaries.—Vermont is bounded on the north by the province of Canada, on the east by New Hampshire, on the south by Massachusetts, and on the west by New York. The north line of the state runs upon the parallel of latitude 45° north. This line was first surveyed by commissioners appointed by the provinces of New York and Canada, in the year 1767. It was afterwards run, but very erroneously, by I. Collins and I. Carden, in 1772. In 1806, Dr. Samuel Williams made some observations with the view of ascertaining the true north line of the state, and still further observations were made in 1818, by Messrs. Hassler and Tiarks, surveyors under the treaty of Ghent. Ac-

the longitude of the University. But the opportunity proved unfavorable, the sun being hid by clouds during the greater part of the eclipse. Of the beginning he had a tolerable observation, and from this alone he carefully calculated the longitude by Dr. Bowdich's precepts, and the result was $73^{\circ} 10' 36''$ for the longitude of the University, or about 4m. less than was obtained from the preceding observations; and, as he is inclined, from other circumstances, to think it as near an approximation to the true longitude as any yet obtained, has adopted it in this work.

BOUNDARIES.

EXTENT.—AREA.

DIVISIONS.

sording to the latter, the 45th parallel lies a little to the southward of the line previously established, but it is not yet finally settled. The eastern boundary was established by a decree of George III, July 20th, 1764, which declared the western bank of the Connecticut river to be the western boundary of New Hampshire. The southern boundary is derived from a royal decree of March 4th, 1740, and was surveyed by Richard Hazen, in February and March, 1741. This line, which was the divisional line between Massachusetts and New Hampshire, was to run due west from a point three miles to the northward of Patucket falls, till it reached the province of New York. It was run by the compass, and ten degrees allowed for westerly variation of the magnetic needle. This being too great an allowance, the line crossed the Connecticut river 2' 57" to the northward of a due west line. In consequence of this error, New Hampshire lost 59,873 acres, and Vermont 133,897 acres, and the south line of the state is not parallel with the north line. The western boundary was settled by the governments of Vermont and New York at the close of their controversy, in 1790. This line passes along the western boundaries of the townships of Pownal, Bennington, Shaftsbury, Arlington, Sandgate, Rupert, Pawlet, Wells and Poultney, to Poultney river; thence along the middle of the deepest channel of said river, East bay and lake Champlain to the 45th degree of north latitude, passing to the eastward of the islands called the Four Brothers, and to the westward of Grand Isle and Isle la Motte. The portion of this line between the southwest corner of the state and Poultney river, was surveyed in 1813 and 1814, and the report and plan of the survey are in the office of the Secretary of State at Montpelier.

Extent and Area.—The length of Vermont from north to south is 157½ miles, and the average width from east to west 57½ miles, which gives an area of 9,056½ square miles, or 5,795,960 acres. The length of the north line of the state is 90 miles, and of the south line 41 miles, but, on account of the great bend of the Connecticut to the westward, the mean width of the state is considerable less than the mean between these two lines, as above stated. The width of the state from Barnet to Charlotte through Montpelier, which is 50 miles nearer to the northern than to the southern boundary, is only about 60 miles. On account of the irregularities in the western and eastern boundaries, both these lines are longer than the mean length of the state, the

former being about 175 miles, and the latter, following the course of the Connecticut, 215 miles.* The state is divided into two equal parts by the parallel of 44d. 9m. north latitude, and also by the meridian in 4d. 19m. of east longitude. These two lines intersect each other near the western line of Northfield, and about 10 miles south westerly from Montpelier, and the point of intersection is the *geographical centre of the state*.

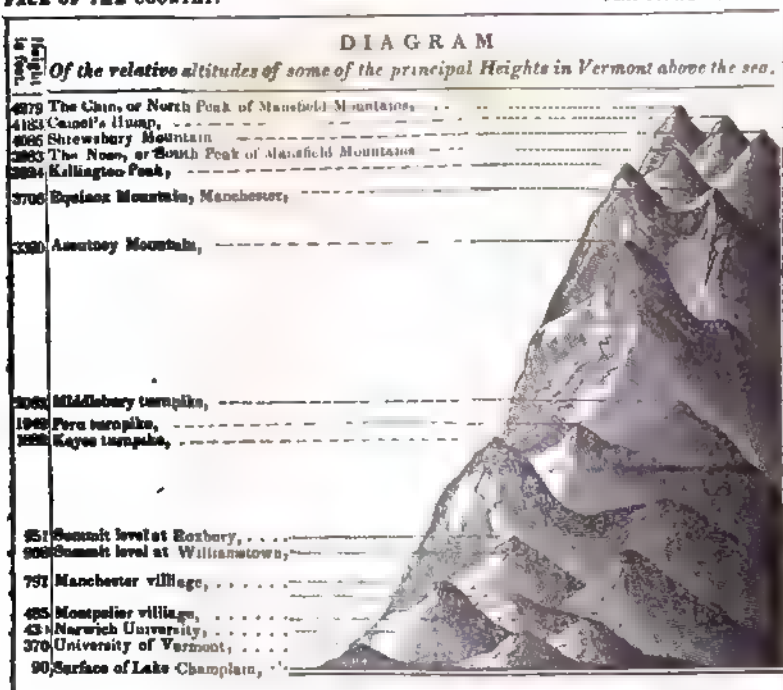
Divisions.—The Green Mountains extend quite through the state from south to north, and, following the western range, divide it into two very nearly equal parts. These form the only natural division, with the exception of the waters of lake Champlain, which divide the county of Grand Isle from the counties of Franklin and Chittenden, and the several islands which compose that county, from each other, and from the main land. For civil purposes the state is divided into 14 counties, which are sub-divided into 245 townships, and several small gores of land, which are not yet annexed to, or formed into, townships. The names of the counties, the date of their incorporation, the shire towns, and the number of towns in each county at the present time (1842,) are exhibited in the following table:

Counties.	Incorporated.	Shire Towns.	No
Addison,	Feb. 27, 1787	Middlebury,	22
Bennington	Feb. 11, 1779	Bennington	17
Caledonia,	Nov. 5, 1792	Manchester,	17
Chittenden,	Oct. 22, 1782	Danville,	18
Essex,	Nov. 5, 1792	Burlington,	15
Franklin,	Nov. 5, 1792	Guildhall,	17
Grand Isle,	Nov. 9, 1802	St. Albans,	14
Lamoille	Oct. 26, 1835	North Hero,	5
Orange,	Feb. 1781	Hydepark,	12
Orleans,	Nov. 5, 1792	Chelsea,	17
Rutland,	Feb. 1781	Irasburgh,	19
Washington	Nov. 1, 1810	Rutland,	26
Windham,	Feb. 11, 1779	Montpelier,	17
Windsor,	Feb. 1781	Newfane,	23
		Woodstock,	23

* Dr. Williams (vol. I, p. 24) seems to have, inadvertently, taken the mean of the two ends of the state for its mean width and thus computed the area at 10,237 1-4 square miles, or 1181m. too much; but this is the area which has usually been given in our geographies and other works respecting Vermont. As the area of countries forms the basis of statistical tables, it is a matter of some consequence that it should be correctly stated. Suppose for example, we wish to know how Vermont compares with the other states in density of population, we divide the population of each state by its area and the quotient is the average number of persons to each square mile in the states respectively. Now if we take the last census and the area at 10,237, the population is only about 28 to a square mile, but if we take the true area, 9,056, it is 32 to the square mile, which would effect very materially its relation to the other states. According to the census of 1820, Vermont was set down as the 10th state in density

FACE OF THE COUNTRY.

PRINCIPAL SUMMITS.



SECTION II.

Face of the country.

Mountains—The surface of Vermont is generally uneven. A few townships along the margin of lake Champlain may be called level; but with these exceptions, the whole state consists of hills and valleys, alluvial flats and gentle acclivities, elevated plains and lofty mountains. The celebrated range of Green Mountains, which give name to the state, extends quite through it from south to north, keeping nearly a middle course between Connecticut river on the east and lake Champlain on the west. From the line of Massachusetts to the southern part of Washington county, this range continues lofty, and unbroken through by any considerable streams; dividing the counties of Windham, Windsor and Orange from the counties of Bennington, Rutland and Addison. In this part of the state, the communication between the eastern and western sides of the mountain was formerly difficult, and the phrase, *going over the mountain*, denoted an arduous business. But on account of the great improvement

of population, whereas, if the true area had been used in the computation, she would have ranked as the eighth.

of the roads, more particularly in their more judicious location near the streams, the difficulty of crossing the mountain has nearly vanished. In the southern part of Washington county, the Green Mountains separate into two ranges. The highest of these ranges, bearing a little east of north, continues along the eastern boundaries of the counties of Chittenden and Franklin, and through the county of Lamoille to Canada line; while the other range strikes off much more to the east through the southern and eastern parts of Washington county, the western part of Caledonia county and the north western part of Essex county to Canada. This last is called the *height of lands*, and it divides the waters, which fall into Connecticut river, in the north part of the state, from those which fall into lake Champlain and lake Memphremagog. This branch of the Green Mountains, though it nowhere rises so high as many points of the western branch, is much more uniformly elevated; yet the acclivity is so gentle as to admit of easy roads over it in various places. The western range, having been broken through by the rivers Winooksi, Lamoille and Missisco, is divided into several sections, these rivers having opened passages for good roads along their banks, while

MOUNTAINS.

the intervening portions are so high and steep as not to admit of roads being made over them, with the exception of that portion lying between the Lamoille and Missisco. This part of the Green Mountains presents some of the most lofty summits in the state; particularly the Nose and Chin in Mansfield, and Camel's Hump in Huntington. These, together with other important mountains and summits in the state, are exhibited in the foregoing table and cut, and will also be described in the Gazetteer, under their respective names. The sides, and, in most cases, the summits of the mountains in Vermont, are covered with evergreens, such as spruce, hemlock and fir. On this account the French, being the first civilized people who visited this part of the world, early gave to them the name of *Verd Mont*, or Green Mountain; and when the inhabitants of the New Hampshire Grants assumed the powers of government, in 1777, they adopted this name, contracted by the omission of the letter *d*, for the name of the new state.*

* This name is said to have been adopted upon the recommendation of Dr. Thomas Young—(see part 2d, page 106.) The following account of the christening of the Green Mountains, is given by the Rev. Samuel Peters in his life of the Rev. Hugh Peters, published at New York in 1807.

"Verd-Mont was a name given to the Green Mountains in October, 1763, by the Rev. Dr. Peters, the first clergyman who paid a visit to the 50,000 settlers in that country, in the presence of Col. Taplin, Col. Willes, Col. Peters, Judge Peters and many others, who were proprietors of a large number of townships in that colony. The ceremony was performed on the top of a rock standing on a high mountain, then named Mount Pisgah because it provided to the company a clear sight of lake Champlain at the west, and of Connecticut river at the east, and overlooked all the trees and hills in the vast wilderness at the north and south. The baptism was performed in the following manner: Priest Peters stood on the pinnacle of the rock, when he received a bottle of spirits from Col. Taplin; then haranguing the company with a short history of the infant settlement, and the prospect of its becoming an impregnable barrier between the British colonies on the south and the late colonies of the French on the north, which might be returned to their late owners for the sake of governing America by the different powers of Europe, he continued, 'We have here met upon the rock Etam, standing on Mount Pisgah, which makes a part of the everlasting hill, the spine of Asia, Africa and America, holding together the terrestrial ball, and dividing the Atlantic from the Pacific ocean—to dedicate and consecrate this extensive wilderness to God manifested in the flesh, and to give it a new name worthy of the Athenians and ancient Spartans,—which new name is *Verd Mont*, in token that her mountains and hills shall be ever green and shall never die.'

RIVERS AND STREAMS.

Rivers and Streams.—The rivers and streams lying within the state of Vermont are very numerous, but small. They, in most cases, originate among the Green Mountains, and their courses are short and generally rapid. Connecticut river washes the whole eastern border of the state, but belongs to New Hampshire, the western margin of that stream forming the boundary line between New Hampshire and Vermont. The Connecticut receives the waters from 3,700 square miles of our territory. It receives from Vermont, besides numerous smaller streams, the waters of the eleven following rivers, viz: Wantasticook, or West, Saxton's, Williams', Black, Ottaquechy, White, Ompompanoosuc, Wait's, Wells', Passumpsic, and Nulhegan. Clyde, Barton and Black river run northerly into Memphremagog lake. Missisco, Lamoille, Winooski and Poultney river and Otter creek flow westerly into lake Champlain, and the Battenkill and Hoosic westerly into Hudson river. Deerfield river runs southerly from Vermont and falls into the Connecticut in Massachusetts; and the Coatacook and Pike river head in the north part of the state and run northerly into Canada, the former uniting with Massuippi river at Lenoxville and the latter falling into the head of Missisco bay. All these streams and many smaller ones will be described in the Gazetteer under their respective names.

No country in the world is better supplied with pure and wholesome water than Vermont. There are scarcely any farms in the state which are not well watered by springs, or brooks; and none, with the exception of those upon the islands in lake Champlain, which are not in the vicinity of one, or more, considerable mill stream. But while Vermont is so abundantly supplied with water, there is, probably, no part of our country in which so little stagnant water is found. The waters of the lakes and ponds are usually clear and transparent, and nearly all the springs and streams are brisk and lively. It is a common remark that the streams in this state have diminished very much in size, since the country began to be cleared and settled, and it is doubtless true to some extent. Many mills, which

He then poured out the spirits and cast the bottle upon the rock Etam."

There is no doubt that the name *Verd Mont* had been applied to this range of mountains long previous to the above transaction, (if, indeed, it ever took place;) but we do not find that the name *Verd Mont*, or *Vermont*, was ever applied to the territory generally known as the New Hampshire Grants, previous to the declaration of the independence of the territory in January, 1777.

LAKES AND PONDS.

formerly had an abundance, have ceased to receive the necessary supply of water during a considerable portion of the year; and many mill sites, which were once thought valuable, have, from the same cause, become entirely useless. One of the principal causes of this diminution of our streams is supposed to be the cutting down of the forests, which formerly threw off immense quantities of vapor into the atmosphere, which was again precipitated upon the earth in rain and snow. But it is believed that the quantity of water which annually passes off in our streams is not so much less than formerly as is generally imagined. Before the country was cleared, the whole surface of the ground was deeply covered with leaves, limbs, and logs, and the channels of all the smaller streams were much obstructed by the same. The consequence was, that, when the snows dissolved in the spring, or the rains fell in the summer, the waters were retained among the leaves, or retarded by the other obstructions, so as to pass off slowly, and the streams were kept up, nearly uniform as to size, during the whole year. But since the country has become settled, and the obstructions, which retarded the water, removed by freshets, when the snows melt or the rains fall, the waters run off from the surface of the ground quickly, the streams are raised suddenly, run rapidly, and soon subside. In consequence of the water being thus carried off more rapidly, the streams would be smaller than formerly during a considerable part of the year, even though the quantity of water be the same. It is a well known fact that the freshets in Vermont are more sudden and violent than when the country was new.

The waters of the lakes, ponds and streams are universally soft, miscible with soap, and in general free from foreign substances. And the same may be said of most the springs, particularly on the Green Mountains, and in that portion of the state lying east of these mountains. The waters of most of the springs and wells in the western part of the state are rendered hard and unsuitable for washing by the lime they hold in solution, and there are many springs which are highly impregnated with Epsom salts, and others containing iron, sulphuretted hydrogen, &c. These mineral springs will be described in another place.

Lakes and Ponds. Small lakes and ponds are found in all parts of Vermont, but there are no large bodies of water which lie wholly within the state. Lake Champlain lies between this state and the

LAKE CHAMPLAIN.

state of New York, and more than half of it within the limits of Vermont. It extends in a straight line from south to north, 102 miles along the western boundary, from Whitehall to the 45th degree of latitude, and thence about 24 miles to St. Johns in Canada, affording an easy communication with that province and with New York. This lake is connected with Hudson river, at Albany, by a canal 64 miles in length; so that the towns lying on the shores of Lake Champlain have direct communication by water with the cities of Troy, Albany, Hudson, and New York, and, by means of the great western canal, with the great western lakes. The length of this lake from south to north, measured in a straight line from one extremity to the other, and supposing it to terminate northerly at St. Johns, is 126 miles. Its width varies from one fourth of a mile to 13 miles, and the mean width is about $4\frac{1}{2}$ miles. This would give an area of 567 square miles, two thirds of which lie within the limits of Vermont. The waters, which this lake receives from Vermont, are drained, by rivers and other streams, from 4088 miles of its territory. Its depth is generally sufficient for the navigation of the largest vessels. It received its present name from Samuel Champlain, a French nobleman, who discovered it in the spring of 1609, and who died at Quebec in 1635, and was not drowned in its waters, as has been often said.* One of the names given to this lake by the aborigines is said to have been *Caniaderi-Guarunte*, signifying the mouth or door of the country.† If so, it was very appropriate, as it forms the gate-way between the country on the St. Lawrence and that on the Hudson. The name of this lake in the Abenâqui tongue was *Petawâ-bouque*, signifying alternate land and water, in allusion to the numerous islands and projecting points of land along the lake. Previous to the settlement of the country by Europeans, this lake had long been the thorough-fare between hostile and powerful Indian tribes, and its shores the scene of many a mortal conflict. And after the settlement, it continued the same in reference to the French and English colonies, and subsequently in reference to the English in Canada and the United States. In consequence of this peculiarity of its location, the name of Lake Champlain stands connected with some of the most interesting events in the annals of our country; and the transactions associated with the names of Ticonderoga, and Crown Point,

* See Part II, p. 2. † Spafford's *Gaz. of N. Y.*, p. 98.

MEMPHREMAGOG LAKE.

BAYS, SWAMPS, ISLANDS, SOIL.

and Plattsburgh, and many other places, united with the variety and beauty of the scenery, the neatness and accommodation of the steamboats, and the unrivalled excellency of their commanders, render a tour through this lake one of the most interesting and agreeable to the enlightened traveller. A historical account of the most important transactions upon Lake Champlain, together with some account of the navigation of the lake, and particularly of the steamboats which have been built upon it, will be found in part second, and a much more minute description of the lake under its name in part third.

Memphremagog lake is situated on the north line of the state, and about midway between lake Champlain and Connecticut river. It extends from south to north, and is nearly parallel with lake Champlain. It is 30 miles long, and the average width about two miles. One third part of this lake lies in Vermont; the other two thirds in Canada. The name of this lake in the Abenâqui tongue was *Mem-plow-bouque*, signifying a large expanse of water. This, together with numerous small lakes and ponds, which lie wholly within the state, will be described in part third, either under their names, or in the account of the towns in which they are situated. There is abundant evidence that most of our lakes and ponds were formerly much more extensive than they are at present, and that they have been diminished, both by the deposit of earthy matter brought in by the streams, and by the deepening of the channels at their outlets; and there is also sufficient proof of the former existence of many ponds in this state, which have long since become dry land by the operation of the same causes. Several of these will be pointed out in the descriptions of the rivers in part third, particularly in the description of Winooski river, Barton river, &c.

Bays.—The shores of Lake Champlain are indented by numerous bays, most of which are small and of little consequence. Missisco bay is the largest of these, and belongs principally to Vermont, lying between the townships of Alburgh and Highgate, and extending some distance into Canada. The other bays of most consequence, lying along the east shore of the lake and belonging to Vermont, are M'Quam bay in Swanton, Belamaqueen bay lying between St. Albans and Georgia, Mallets bay in Colchester, Burlington bay between Appletree point and Red Rocks point, Shelburne bay between Red Rocks point and Pottier's point, Button bay in Ferrisburgh, and East bay between Westhaven and White-

hall. Besides these there are several smaller bays lying along the east shore of Lake Champlain, and a considerable bay at the south end of Lake Memphremagog, called South bay. Most of these bays will be more particularly described under their names in part third, and also some of the most important bays lying along the west shore of Lake Champlain, and belonging to New York.

Swamps.—These are hardly of sufficient importance to deserve a separate notice. Though considerably numerous, they are, in general, of small extent, and, in many cases, have been, or may be drained and converted into excellent lands. They are most common in the northern and northeastern parts of the state. In the county of Essex are several unsettled townships, which are said to be made up of hills and mountains with swamps lying between them, which render them to a great extent incapable of settlement. There is a considerable tract of swampy land at the south end of Memphremagog lake, and another in Highgate about the mouth of Missisco river. When the country was new, there were many stagnant coves along the margin and among the islands of Lake Champlain, which, during the hotter parts of the summer, generated intermittent and bilious fevers. But, since the clearing of the country, these have been, to a considerable extent, filled up, and, with the causes which produced them, those disorders have nearly disappeared.

Islands.—The principal islands belonging to Vermont, are South Hero, North Hero, and La Motte. South Hero, called also Grand Island, is 13 miles long, and is divided into two townships, by the name of South Hero and Grand Isle. North Hero is about 11 miles long, but very narrow, and constitutes a township bearing the same name as the island. Isle la Motte lies westward of North Hero, and constitutes a township by the same name. A more particular account of these islands, and also a description of Juniper island and several others lying in Lake Champlain, will be found under their names in part third.

Soil and Productions.—The soil of Vermont is generally a rich loam, but varies considerably according to the nature and compositions of the rocks in the different parts of the state. Bordering our lakes, ponds, and rivers, are considerable tracts of rich and beautiful *intervale**

* *Intervale.* This word has not yet found a place in our dictionaries, and there has been much carping about it by Dr. Dwight, Mr. Kendall, and other travellers and critics. But we use it, notwithstanding.

SOIL AND PRODUCTIONS.

MEDICINAL SPRINGS.

lands, which consist of a dark, deep and fertile alluvial deposit. These intervalles are level tracts lying but little higher than the ordinary height of the water in the streams, and are in most cases subject to being flooded, when the water is very high. They were, while in a state of nature, covered with a heavy growth of forest trees, such as oak, butternut, elm, buttonwood, walnut, ash, and some other kinds. Back of these flats were frequently others, elevated a few feet higher, and covered with white pine. Still further back, the land rises, in most cases very gradually, into hills and upland plains, and the soil becomes harder and more gravelly, but very little diminished in richness and fertility. The timber upon these lands, which constitute the greater part of the state, was principally sugar maple, beech and birch, interspersed with bass, ash, elm, butternut, cherry, hornbeam, spruce and hemlock. And still further back the lands rise into mountains, which are in general timbered with evergreens, such as spruce, hemlock and fir. The loftiest mountains are generally rocky and the summits of some few of them consist of naked rock, with no other traces of vegetation than a few stunted shrubs and mosses; but they are, in general, thickly covered with timber to their very tops. Along the western part of the state, and bordering upon Lake Champlain, are extensive tracts of light sandy soil, which were originally covered with white, pitch and Norway pine, and in the northern part of the state, swamps are numerous, which were well stored with tamarack and white cedar. A more full account of the native vegetables found in this state will be given in a subsequent chapter. Since the country has been cleared, the soil has, in general, been found sufficiently free from stone to admit of easy cultivation, and to be very productive in corn, grain and grass. Without manuring the intervalles usually produce large crops, and are easily cultivated, but these crops are liable, occasionally, to be destroyed by floods—the same agency which produces the fertility of the soil on which they grow. All parts are, however, sufficiently fertile amply to reward the labors of the husbandman, and

ing, because it will express our meaning more briefly and intelligibly to the greater part of our readers, than any other we could employ. It may be derived from *inter*—within, and *vallis*—a vale, or valley; and in its specific signification, it denotes those alluvial flats, lying along the margins of streams, which have been, or occasionally are overflowed in consequence of the rising of the water. For the use of the word in this sense, we have the authority of Dr. Belknap and Dr. Williams, the historians of New Hampshire and Vermont, and other good writers.

the farmer who is saving and industrious seldom fails of having his barn filled with fodder for his horses, cattle and sheep, his granary with corn, wheat, rye, oats, peas and beans, and his cellar with potatoes, apples, and other esculent vegetables. A sufficient quantity of grain for the supply of the inhabitants might easily be raised in all parts of the state, yet the greater part of the lands are better adapted for grazing than for tillage. The hills and mountains, which are not arable on account of their steepness, or rocks, afford the best of pasturage for cattle and sheep. Of the fruits, nuts, berries, &c., which grow in Vermont, both wild and cultivated, a more particular account will be given in a subsequent chapter on the botany of the state.

Medicinal Springs.—There are in Vermont springs which are more or less impregnated with mineral, or gaseous substances, but none which have yet acquired a very general or permanent celebrity for their curative properties. Along the shore of Lake Champlain, in the counties of Addison and Rutland, the waters generally are impregnated with Epsom salts, (*sulphate of magnesia*). Some of the springs are so highly charged with these salts, in the dryer parts of the year, that a pail full of the water will produce a pound of the salts. They have been manufactured, for medicinal purposes, in some quantities, and, did the price of the article make it an object, they might be made here to almost any extent.

The medicinal properties of most of the waters in this state, which have acquired any notoriety, are derived from gaseous and not from mineral substances. In different towns in the northeastern part of the state, are springs of cold, soft and clear water, which are strongly impregnated with sulphuretted hydrogen gas, and said to resemble the Harrow-Gate waters in England, and those of Ballcastle and Castlemain in Ireland. These waters are found to be efficacious in scrofulous and many other cutaneous complaints, and the springs at Newbury, Tunbridge, Hardwick, &c., have been much resorted to by valetudinarians in their vicinity.

Of medicinal springs on the west side of the Green Mountains, those of Clarendon and Alburgh have acquired the greatest notoriety. It is now about 16 years since the springs at Clarendon began to be known beyond their immediate neighborhood. Since that time their reputation has been annually extending, and the number of visitors increasing, till they have at length become a place of considerable resort for the afflicted from various

CLARENDON SPRINGS.

parts of the country. They are situated in a picturesque and beautiful region, 7 miles southwest from Rutland, and have, in their immediate vicinity, good accommodations for 500 visitors. The waters are found to be highly efficacious in affections of the liver, dyspepsia, urinary and all cutaneous complaints, rheumatism, inveterate sore eyes, and many others, and they promise fair to go on increasing in notoriety and usefulness. These waters differ in their composition from any heretofore known, but resemble most nearly the German Spa water. For their curative properties they are believed to be indebted wholly to the gases they contain. They have been analyzed by Mr. Augustus A. Hayes, of Roxbury, Mass., with the following results. One gallon, or 235 cubic inches of the water contained,

Carbonic acid gas	46.16 cubic inch.
Nitrogen gas	9.63 " "
Carbonate of Lime	3.02 grains.
Murate of Lime	} 2.74 grs.
Sulphate of Soda	
Sulphate of Magnesia	

One hundred cubic inches of the gas which was evolved from the water, consisted of

Carbonic acid gas	0.05 cubic inches.
Oxygen gas	1.50 " "
Nitrogen gas	98.45 " "

The Alburgh springs do not differ materially from the springs at Newbury, Tunbridge, and other places in the north-eastern part of the state, owing their medicinal properties principally to the sulphuretted hydrogen gas, which they contain.

Caves. There are no caves in Vermont which will bear comparison with some of the caverns found in other parts of the world, and yet we have several, which are deserving the attention of the curious. Those at Clarendon, Plymouth and Danby are the most interesting. The Clarendon cave is situated on the southeasterly side of a mountain in the westerly part of that town. The descent into it is through a passage 2½ feet in diameter and 31 feet in length, and which makes an angle of 35 or 40° with the horizon. It then opens into a room 20 feet long, 12½ wide, and 18 or 20 feet high. The floor, sides and roof of this room are all of solid rock, but very rough and uneven. From the north part of this room is a passage about 3 feet in diameter and 24 feet in length, but very rough and irregular, which leads to another room 20 feet wide, 30 feet long and 18 feet high. This room, being situated much lower than the first, is usually filled with water in the spring

of the year, and water stands in the lowest parts of it at all seasons."

The Plymouth caves are situated at the base of a considerable mountain, on the southwest side of Black river, and about 50 rods from that stream. They are excavations among the lime rock, which have evidently been made by running water. The principal cave was discovered about the first of July, 1818, and on the 10th of that month was thoroughly explored by the Author, who furnished the first description of it, which was published shortly after in the Vermont Journal at Windsor. The passage into this cavern is nearly perpendicular, about the size of a common well, and 10 feet in depth. This leads into the first room which is of an oval form, 30 feet long, 20 wide, and its greatest height about 15 feet. It appears as if partly filled up with loose stones, which had been thrown in at the mouth of the cave. From this to the second room is a broad sloping passage. This room is a little more than half as large as the first. The bottom of it is the lowest part of the cave, being about 25 feet below the surface of the ground, and is composed principally of loose sand, while the bottoms of all the other rooms are chiefly rocks and stones. The passage into the third room is 4 feet wide and 5 high, and the room is 14 feet long, 8 wide, and 7 high. The fourth room is 30 feet long, 12 wide, and 18 high, and the rocks, which form the sides, incline towards each other and meet at the top like the ridge of a house. The fifth room, very much resembling an oven in shape, is 10 feet long, 7 wide, and 4 high, and the passage into it from the third room is barely sufficient to admit a person to crawl in. At the top of this room is a conical hole, 10 inches across at the base and extending 2 feet into the rock. From the north side of the second room are two openings leading to the sixth and seventh, which are connected together, and each about 15 feet long, 7 wide, and 5 high. From the seventh room is a narrow passage which extends northerly 15 or 16 feet into the rocks, and there appears to terminate. When discovered, the roof and sides of this cavern were beautifully ornamented with stalactites, and the bottom with corresponding stalagmites, but most of these have been rudely broken off and carried away by the numerous visitors. The temperature, both in winter and summer, varies little from 44½°, which is about the mean temperature of the climate of Vermont in that latitude. A few

* Williams' History of Vermont, vol. 1, p. 20.

rods to the westward of this cavern there is said to be another which is about two thirds as large.

SECTION III.

Climate and Meteorology.

Temperature.—Though situated in the middle of the north temperate zone, the climate of Vermont is subject to very considerable extremes both of heat and cold, and the changes of temperature are often very sudden. The usual annual range of the thermometer, in the shade, is from about 92° above to 22° below zero on Farenheit's scale, though it is sometimes known to rise as high as 100°, and at other times to sink as low as 36°, and even to 39° or 40° below zero. But so great a degree of cold as that last mentioned, which is the freezing point of mercury, has not, to our knowledge, been experienced but twice since the means of measuring temperature have been in use in the state, and these were both in the year 1835; the first on the 4th of January, and the second on the morning of the 18th of December. The temperature of the 4th of January, as noted at several

places in this state, was as follows: Montpelier —40°, White River —40°, Bradford —38°, Newbury —36°, Norwich —36°, Windsor —34°, Hydepark —36°, Rutland —30°, and Burlington —26°; and the temperature varied but little from the above at those places on the 18th of December. For some time after the first settlement of Vermont the thermometer was hardly known in this part of the country; and since that instrument has become common, very few meteorological journals have been kept, and those few have not, in general, been kept with sufficient care to render them of much value, nor have many of them been preserved in a condition to be accessible to those who may wish to consult them. And hence we possess few accurate data, either for determining the mean annual temperature of the different sections of the state, or for settling the mooted question with regard to a change of climate corresponding to the clearing and cultivating of the country. The results of the principal observations, to which we have access, and which have been made in this state, to ascertain the temperature of the months and the mean annual temperature, are contained in the following tables:

MONTHS.	Rutland.	Burlington.	Windsor.	Burlington.						
	Williams.	Sanders.	Fowler	Thompson.						
	1789.	1803-8.	1806.	1828.	1832.	1833.	1838.	1839.	1840.	1841
January,	18.0°	14 4°	22.0°	25.0°	19.7	22.8	26.1	18.6	12.2	25.3
February,	18.5	18.9	26.5	31.1	19.3	15.3	12.3	24.2	28.4	19.6
March,	32.0	28.5	30.3	32.4	30.8	28.2	32.6	36.6	31.4	25.3
April,	41.0	39.5	38.1	39.2	39.4	46.1	35.8	46.3	47.0	39.1
May,	50.0	56.3	57.1	57.6	52.4	57.0	51.7	53.3	57.2	52.8
June,	64.0	66.6	66.4	69.7	61.3	59.6	68.1	60.7	65.6	67.1
July,	67.5	68.2	68.5	70.1	68.5	66.2	71.8	71.5	71.6	68.9
August,	67.5	67.6	64.3	70.2	68.3	63.3	67.5	68.3	72.5	70.5
September	57.0	57.1	62.1	60.8	58.7	57.2	60.5	60.6	58.3	61.9
October,	41.0	45.2	49.5	46.7	47.7	44.9	46.8	50.8	48.0	45.0
November,	37.0	33.5	36.2	38.9	35.6	34.5	31.3	34.0	35.6	35.3
December,	30.0	24.7	24.6	29.3	23.6	24.7	19.1	26.2	21.1	26.4
	43.6	43.4	45.6	47.6	43.8	43.3	43.6	45.5	45.7	44.8

Meteorological observations at Williamstown by Hon. Elijah Paine.

MONTHS.	1829	1830	1831	1832	1833	1834	1835	1836	1837	1838	1839	1840	1841
January,		11.4	10.9	17.1	19.3	12.5	17.9	17.3	9.7	23.9	15.3	9.0	21.6
February,	10.9	14.3	14.6	14.6	13.5	26.5	12.6	10.5	16.7	9.9	20.8	23.7	15.8
March,	23.5	26.4	26.4	25.4	23.5	27.2	25.1	22.9	23.6	30.9	25 8	26.0	24.1
April,	36.6	44.6	39.8		41.2	41.7	36.1	34.5	36.5	31.2	41.2	40.7	34 7
May,	54.8	49.6	53.2		54.7	48.9	48.0	51.6	45.9	48.5	48.7	51.7	47.7
June,	58.7	58.9	64.8	59.3	55.4	57.4	59.4	58.8	60.6	63.0	54.9	58.5	63.1
July,	60.2	64.1	64.4	63.3	62.3	68.2	64.6	65.4	61.2	66.2	65.2	64.8	62.6
August,	60.7	60.7	63.6	63.5	59.5	60.5	60.9	57.0	59.8	61.6	61.4	64.6	63.9
September,	47.9	51.4	53.0	53.9	52.7	55.4	50.0	53.3	52.0	54.6	54.2	52.5	57.9
October,	42.6	44.4	44.6	43.9	41.2	39.7	47.8	34.5	39.0	30.7	45.4	41.9	38.5
November,	29.7	38.2	30.9	31.7	29.5	28.9	29.8	28.7	30.6	25.3	28.1	30.2	29.4
December,	27.3	24.9	7.1	19.7	21.1	16.0	13.1	17.8	14.4	14.1	21.4	16.2	21.7
		40.7	39.4		39.5	40.2	38.8	37.7	37.5	39.1	40.2	39.9	40.0

MEAN TEMPERATURE AT BURLINGTON AND WILLIAMSTOWN.

WINDS.

With the exception of the first three columns in the *first* of the two preceding tables, the particulars of which are not known, all the means for the months have been deduced from *three* daily observations, taken at sun-rise, 1 o'clock, P. M. and 9 in the evening. Now, as the three daily observations at Burlington synchronize for several years with those at Williamstown, the two tables enable us to make a very accurate comparison of the mean temperature of the two places; and the comparison shows that the mean temperature of Burlington, although situated 22' farthest north, is about 5° warmer than that of Williamstown, that of the former being 44.6° and the latter 39.4°. But the cause of this difference is obvious in the location of the two places, Burlington being situated on the margin of lake Champlain, and the place of observation elevated only 250 feet above it, while Williamstown lies among the Green Mountains near the geographical centre of the state, and, the place of Judge Paine's observation, elevated 1500 feet above the lake.*

The mean annual temperature of Burlington, deduced from all of the 12 years observations in the preceding table, is 44.1°, and from the seven years observations by the author 44.9°, but, as the year 1828 was very remarkably warm, that should, perhaps, be set aside, and the mean of the other six, 44.4°, taken as probably a fair statement of the mean annual temperature of Burlington. The mean annual temperature of Williamstown, deduced from the whole of Judge Paine's observations, is 40.3°.

Many perennial springs, and deep wells are found to continue nearly of the same temperature, both in summer and winter, and to be but very little affected

by the changes of temperature which are constantly going on at the surface of the earth; the temperature of these may, therefore, be regarded as a pretty fair indication of the mean annual temperature of the climate. The temperature of a well 40 feet deep, belonging to Mr. Samuel Reed, in Burlington, has been observed and noted during the year 1841 as follows, the first number after the day of the month being the depth in feet to the surface of the water at the time of the observation: Jan. 1, 14—46°, Feb. 12, 18—44½°, April 14, 16—44°, June 1, 10—44°, July 20, 10—46½°, and Dec. 8, 20—45½°, giving a mean of 45.1°, or .3° higher than that deduced from the daily observations.

Winds.—For small sections of country the prevailing winds usually take their direction from the position of the mountains and valleys. That is very much the case in Vermont. Through the valley of the Connecticut and of lake Champlain the winds usually blow in a northerly or southerly direction, while easterly and westerly winds are comparatively of rare occurrence. In the valley of lake Champlain east winds are exceedingly rare, as will be seen by the following tables.* Along our smaller rivers, particularly the Winooski and the Lamoille, the prevailing winds are from the northwest. The following tables contain the result of observations made at Burlington, for eleven years, and at Rutland for one year. In the journal kept by the author at Burlington, and from which the tables on the following page were copied, three observations of wind and weather were entered each day, which synchronize with the observations of temperature for the same years in the preceding table, on the ninth page.

The following table contains the results of five years observation at Burlington, by Dr. Saunders, and one year at Rutland, by Dr. Williams.

Place.	Time.	No.Obs.	N	NE	E	SE	S	SW	W	NW	fair.	clody	rain	snw	fog	thun	au
Burlington	1803—8	1682	739	11	19	1	826	25	43	18	1025	676	289	127	19	45	27
Rutland	1789	1095	153	13	16	76	272	182	125	258	452	643	89	41	37	15	21

* The author has in his possession a meteorological journal kept at Hydepark by Dr. Ariel Huntoon, for a period of 9 years, of which he had intended to insert an abstract; but, finding the three daily observations to have been made too near the warmest part of the day to furnish the true mean temperature of the 24 hours, and consequently unsuitable for comparison with the other tables, he concluded not to insert it. In order to render meteorological observations of service in determining the relative temperature of places, uniformity in the method of making them seems to be indispensable, and a want of this renders a great part of the journals which have been kept nearly useless.

* Although, at Burlington, we seldom have a wind from the east sufficiently strong to turn the vanes upon our churches, it is not uncommon, during the latter part of the night and early in the morning, when the weather is fair, to have a light breeze from the east, which is doubtless occasioned by the rolling down of the cold air from the mountains to supply the rarefaction over the lake. In other words, it is strictly a *land breeze*, similar to what occurs between the tropics. That these breezes are local and limited is evident from the fact, that, at the same time, the general motion of the air is in a different direction, as indicated by the motion of clouds in higher regions of the atmosphere.

METEOROLOGICAL TABLE.—WINDS AND WEATHER AT BURLINGTON.

1832	WINDS.										WEATHER.			WINDS.										WEATHER.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
	N	ne	E	SE	S	sw	W	NW	fair.	cldy	r'n	no	N	ne	E	SE	S	sw	W	NW	fair.	cldy	r'n	no	N	ne	E	SE	S	sw	W	NW	fair.	cldy	r'n	no																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
93	16	2	0	2	40	4	11	18	40	29	3	12	Jan	93	31	1	1	0	51	1	7	1	43	39	6	5	1840	93	35	3	0	6	30	10	8	1	52	33	2	6																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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ANNUAL QUANTITY OF RAIN.

ANNUAL FALL OF SNOW.

Rain.—The quantity of water, which falls in rain and snow in any one year, does not probably differ very considerably in the different sections of the state, but observations are too few to enable us to

speaking with much confidence on this point. The quantity of water, however, which falls at the same places in different years, varies very considerably, as will appear from the following table :

MONTHS.	RUTLAND. WINDSOR.		BURLINGTON.							
	Williams.	Fowler.	Thompson.							
	1789.	1806.	1828.	1832.	1833.	1838.	1839.	1840.	1841.	Mean quantity at B. for 7 years, 37.98 ins.
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	
January,	3.50	2.90	1.30	3.56	1.26	2.52	0.85	1.26	3.49	
February,	2.78	2.44	2.10	3.22	2.63	1.32	1.20	2.19	0.80	
March,	3.10	0.48	1.35	2.31	1.48	1.10	1.43	3.06	3.23	
April,	3.01	2.78	2.75	1.96	1.28	1.34	1.60	4.69	3.54	
May,	4.72	2.06	2.45	5.71	9.85	4.51	2.43	2.46	2.28	
June,	3.91	2.73	3.70	3.41	4.28	5.37	3.70	2.84	5.16	
July,	2.31	4.34	5.95	3.52	7.54	3.25	6.26	4.18	2.87	
August,	2.11	0.95	4.30	4.76	7.34	2.41	1.91	3.51	1.40	
September,	2.48	4.57	9.85	1.81	4.17	1.33	2.91	4.71	3.62	
October,	5.66	1.40	1.65	4.05	6.01	2.98	0.45	3.76	0.83	
November,	4.10	2.17	6.25	3.01	1.91	3.78	2.57	2.22	2.47	
December,	3.49	2.36	1.65	2.27	1.59	0.92	2.68	2.41	3.02	
Total,	41.17	29.18	43.30	39.59	49.24	30.83	27.99	37.28	32.71	

The depth of water, which falls during a rain storm or thunder shower, is much less than people generally suppose. A fall of 4 or 5 inches during a severe thunder shower would not be thought at all extravagant by persons who have paid no attention to the accurate measurement of the quantity which fell. But during the seven years observations at Burlington contained in the above table, the depth of water which fell in one shower has never exceeded two inches, and the whole amount in 24 hours has, in only one instance, exceeded three inches, and that was on the 13th of May, 1833, when the fall of water was 3.54 inches.

Snow.—For more than three months of the year the ground is usually covered with snow, but the depth of the snow, as well as the time of its lying upon the ground, vary much in the different parts of the state. Upon the mountains and high lands, snows fall earlier and deeper, and lie later in the Spring than upon the low lands and valleys, and it is believed that they fell much deeper in all parts of the state, before the country was much cleared, than they have for many years past. As little snow falls at Burlington, probably, as at any place in the state. The following table exhibits the amount at this place for the last five winters :

Fall of Snow at Burlington in the winters of

1837-'8.	Inc.	1838-'9.	Inc.	1839-'40.	Inc.	1840-'1.	Inc.	1841-'2.	Inc.
Nov. 9,	2	Oct. 29,	1	Nov. 6,	2	Oct. 26,	2½	Oct. 8,	2
" 26,	5	Nov. 7,	3½	" 9,	1½	Nov. 22,	7	" 26,	3½
Dec. 10,	3	" 19,	2	Dec. 11,	3	" 26,27,	3½	" 29,	3
" 11,	1	" 28,	2	" 16,	9	Dec. 7,	6	Dec. 2,	1
" 18,	3	Dec. 7,	½	" 17,	1	" 22,	3	" 14,	1½
" 28,	1	" 17,	1	" 28,	5	" 27,	8	" 18,	15
Jan. 15,	1	" 18,	4	" 29,	4	Jan. 2,	10	Jan. 5,	2
" 19,	2	" 23,	6	Jan. 5,	4	" 6, 11,	5	" 9,	2
" 28,	12	" 29,	1	" 15,	1½	" 22,25,	8½	" 27,	3
Feb. 11,	5	Jan. 4,	1	" 23,	6	" 30,	2	Feb. 17,	15
" 13,	3	" 5,	1½	Feb. 26,	1	Feb. 2,	2½	" 22,	1
" 17,	8	" 28,	1	March 7,	1	" 6, 10,	4½	" 26,	4
" 22,	1	Feb. 2,	1	" 10,	2	" 17,27,	7	March 7,	5
March 6,	6	" 8,	2	" 24,	7	March 7,	5	" 15,	1
" 21,	1	" 27,	4	"	"	" 9,	4	" 26,	5
" 28,	2	March 3,	1			" 29,	7		
" 30,	3	" 19,	5			Apr. 6,13,	2		
April 2,	1	April 13,	3½			" 22,	5		
	60		41		48		92½		64

SLEIGHING.

SEASONS.

APPEARANCES OF BIRDS AND BLOSSOMS.

In 1838-'9, sleighs run from December 23, to January 8, but there was no good sleighing during the winter. In 1839-'40 sleighing was excellent from December 16, to February 5, *fifty one days*. In 1840-'41, sleighs run from November 22, to November 29, and from December 7, to December 12, but the sleighing was not good. From December 27, the sleighing was good till the 8th of January, after which there was no good sleighing, although sleighs continued to run till the 20th of March. In 1841-'2, sleighing tolerable from December 18, to January 20, after that no good sleighing though sleighs run at several periods for a few days at a time.

The deepest snows, which fall in Vermont, are usually accompanied by a north or northeasterly wind, but there is sometimes a considerable fall of snow with a northwesterly, or southeasterly wind. A long continuance of south wind usually brings rain, both in winter and summer. Although snows are frequent in winter and rains in summer, storms are not of long continuance, seldom exceeding 24 hours. Storms from the east, which are common on the sea board, do not often reach the eastern part of this state, and on the west side of the Green Mountains they are wholly unknown, or rather, they come to that portion of the country from a northeastern, or southeastern direction. Thunder showers are common in the months of June, July and August, but seldom at other seasons. They usually come from the west, or southwest, but are not often violent or destructive, and very little damage is ever done by hurricanes

or hail. The crops oftener suffer from an excess, than from a deficiency, of moisture, though seldom from either.

Seasons.—During the winter the ground is usually covered with snow, seldom exceeding one or two feet deep on the low lands, but often attaining the depth of three or four feet on the high lands and mountains. The weather is cold, and, in general, pretty uniformly so, with occasional snows and driving winds, till the beginning of March, when with much boisterous weather there begin to appear some slight indications of spring. About the 20th of that month the snows begin to disappear, and early in April the ground is usually bare. But the snows fall some weeks earlier and lie much later upon the mountains than upon the low lands. The weather and state of the ground is usually such as to admit of sowing wheat, rye, oats, barley and peas, the latter part of April. Indian corn is commonly planted about the 20th of May, flowers about the 20th of July, and is ripe in October. Potatoes are planted any time between the 1st of May and the 10th of June. Frosts usually cease about the 10th of May and commence again the latter part of Sept., but in some years slight frosts have been observed, at particular places, in all the summer months, while in others, the tenderest vegetation has continued green and flourishing till November. The observations contained in the following table will afford the means of comparing the springs of a few years past. They are gathered from the Meteorological journal kept by the author at Burlington :

Year.	Robins seen.	Song Sparrows seen.	Barn Swallows seen.	Currants Blossom.	Red Plum Blossom.	Plums and Cherries Blossom.	Orab Apple Blossom.	Common Apple Blossom.
1828			April 28	May 9		May 12		May 16
1829			" 23	" 9	May 12	" 16		" 22
1832	Mar. 25	Mar. 28	" 26	" 12	" 14	" 20	May 24	June 3
1833	" 23	" 28	" 21	" 4	" 7	" 12	" 15	May 18
1837	" 20	" 23	" 30	" 16	" 19	" 28	" 30	June 2
1838	" 23	" 31	May 2	" 19	" 22	" 26	June 1	" 2
1839	" 25	" 25	April 26	" 4	" 12	" 14	May 22	May 26
1840	" 15	" 21	" 21	" 3	" 12	" 17	" 20	" 23
1841	" 27	" 27	" 27	" 23	" 25	" 26	" 29	" 31

Vegetation, upon the low lands and along the margin of the lakes and large streams, is, in the spring, usually, a week or ten days in advance of that upon the high lands and mountains; but frosts usually occur, in the fall, earliest upon the low lands, allowing to each nearly the same time of active vegetation. The low lands, however, enjoy a higher tempera-
ture, and bring fruits and vegetables to maturity which do not succeed well upon the high lands. To the above remark, with regard to early frosts, there are several exceptions. On the low islands and shores of lake Champlain, vegetation is frequently green and flourishing long after the frosts have seared it in other parts of the state, and, along several of the rivers,

OPENING AND CLOSING OF LAKE CHAMPLAIN.

DISAPPEARANCE OF THE ICE.

vegetation is protected by the morning fogs for some time after its growth has been stopped upon the uplands. The early part of the autumn is usually pleasant and agreeable and the cold advances gradually, but as it proceeds the changes become more considerable and frequent, and the great contrast between the temperature of the day and night at this season render much precaution necessary in order to guard against its injurious effects upon health. The ground does not usually become much frozen till some time in November, and about the 25th of that month the ponds and streams begin to be covered with ice, and the narrow parts of lake Champlain become so much frozen as to prevent the navigation from Whitehall to St. Johns, and the line boats go into winter quarters, but the broad portions of the lake continue open till near the first of February, and the ferry boats from Burlington usually cross till the first of January. The following table contains the times of the closing and the opening of the broad lake opposite to Burlington, and when the steamboats commenced and stopped their regular trips through the lake from Whitehall to St. Johns, for several years past :

Year.	Lake Champl'n closed.	Lake Champl'n opened.	Lineboats comenc'd running.	Line Boats stopped.
1816	Feb. 9			
1817	Jan. 29	Apr. 16		
1818	Feb. 2	Apr. 15		
1819	Mar. 4	Apr. 17	Apr. 25	
1820	{ Feb. 3 { Mr. 8	Feb. Mar. 12		
1821	Jan. 15	Apr. 21		
1822	Jan. 24	Mar. 30		
1823	Feb. 7	Apr. 5	Apr. 15	
1824	Jan. 22	Feb. 11		
1825	Feb. 9			
1826	Feb. 1	Mar. 24		
1827	Jan. 21	Mar. 31		
1828	not clos'd			
1829	Jan. 31	Apr.	Apr. 6	
1830				
1831			Apr. 11	
1832	Feb. 6	Apr. 17	Apr. 23	
1833	Feb. 2	Apr. 6	Apr. 8	
1834	Feb. 13	Feb. 20	Apr. 4	Dec. 5
1835	{ Jan 10 { Feb 7	Jan. 23 Apr. 12	Apr. 21	Nov. 29
1836	Jan. 27	Apr. 21	Apr. 25	Nov. 29
1837	Jan. 15	Apr. 26	Apr. 29	Dec. 10
1838	Feb. 2	Apr. 13	Apr. 19	Nov. 26
1839	Jan. 25	Apr. 6	Apr. 11	Nov. 28
1840	Jan. 25	Feb. 20	Apr. 11	
1841	Feb. 18	Apr. 19	Apr. 28	Dec. 1
1842	not clos'd		Apr. 13	

It frequently happens that the ice continues upon the lake for some time after the snows are gone in its neighborhood and the spring considerably advanced. In such seasons the ice often disappears very suddenly, instances having been observed of the lake being entirely covered with ice on one day and the next day no ice was to be seen, it all having disappeared in a single night. People in the neighborhood, being unable to account for its vanishing thus suddenly in any other way, have very generally supposed it to sink. This opinion is advanced in the account of this lake contained in Spafford's Gazetteer of New York, and the anomaly is very gravely attempted to be accounted for on philosophical principles. But the true explanation of this phenomenon does not require the absurdity of the sinking of a lighter body in a heavier. It is a simple result of the law by which heat is propagated in fluids. That bodies are expanded, or contracted, according to the increase or diminution of the heat they contain, is a very general law of nature. Fresh water observes this law, when its temperature is above 40°, but below 40° the law is reversed, and it expands with the reduction of temperature.

When winter sets in, the waters of the lake are much warmer than the incumbent atmosphere. The surface, therefore, of the water communicates its heat to the atmosphere, and, becoming heavier in consequence, sinks, admitting the warmer water from below to the surface. Now since heat is propagated in fluids almost entirely by the motion of the fluids, this circulation will go on, if the cold continues, till all the water from the surface downward to the bottom is cooled down to the temperature of 40°. It will then cease. The colder water now being lighter than that below, will remain at the surface and soon be brought down to the freezing point and congealed into ice. This accounts for the ice taking soequest where the water is most shallow, and also for the closing of the broad parts of the lake earliest in those winters in which there is most high wind, the process of cooling being facilitated thereby.

After the ice is formed over the lake, and during the coldest weather, the great mass of water, after getting a few inches below the ice, is of a temperature 8° above the freezing point. While the cold is severe, the ice will continue to increase in thickness, but the mass of water below the ice will be unaffected by the temperature of the atmosphere above. Now the mean annual temperature of the climate in the neighborhood of lake Champlain

FORMATION OF ANCHOR-ICE.

SMOKY ATMOSPHERE.

DARK DAYS.

does not vary much from 45° , and this is about the uniform temperature of the earth at some distance below the surface. While then the mass of the waters of the lake is at 40° , and ice is forming at the top, the earth, beneath the water, is at the temperature of 45° , or 5° warmer than the water. Heat will, therefore, be constantly imparted to the water from beneath, when the temperature of the water is less than 45° . The only effect of this communication of heat to the water from beneath, during the earlier and colder parts of the winter, is to retard the cooling of the lake and the formation of ice upon its surface. But after the cold abates in the end of winter and beginning of spring, so that the lower parts of the ice are not affected by the frosts from above, the heat, which is communicated from below, acts upon the under surface of the ice, and, in conjunction with the sun's rays, which pass through the transparent surface and are intercepted by the more opaque parts below,* dissolves the softer portions, rendering it porous and loose like wet snow, while the upper surface of the ice, hardened by occasional frosts, continues comparatively more compact and firm. In this state of things, it often happens that, by a strong wind, a rent is made in the ice. The waters of the lake are immediately put in motion, the rotten ice falls into small fragments, and, being violently agitated, in conjunction with the warmer water beneath, it all dissolves and vanishes in the course of a few hours.

There is one phenomenon, which is of common occurrence in many of our streams, during the coldest part of winter, and which may not at first appear reconcilable with what has been said above, and that is, the formation of ice upon the stones at the bottom of the streams, usually called *anchor ice*. Anchor ice is formed at falls and places where the current is so rapid that ice is not formed upon the surface. In the case of running water, and particularly where the water is not deep and the current rapid, over a rough bottom, the temperature of the whole mass is probably reduced nearly or quite to the freezing point before any ice is formed; and then, where the current is so rapid that the ice cannot form at the surface, the ice-cold waters of the surface, in their tumultuous de-

scend, are successively brought in contact with the stones at the bottom, which, themselves, soon become ice-cold, after which they serve as nuclei upon which the waters are crystallized and retained by attraction, forming anchor ice.

Smoky Atmosphere.—From the earliest settlement of this country there have been observed a number of days, both in spring and autumn, on which the atmosphere was heavily loaded with smoke. The smoke has generally been supposed to result wholly from extensive burnings in some unknown part of the country. There is no doubt but that much of the smoke often is produced in this way, but it has appeared to us, that, since smoke is not a product, but a defect, of combustion, it may be possible for it to be produced even where there is no fire. We have been led to this conclusion by observing that the amount of smoke has not always been greatest in those years in which burnings were known to be most extensive; and by observing, moreover, that the atmosphere was usually most loaded with smoke in those autumns and springs which succeeded warm and productive summers. These circumstances have led us to the opinion that the atmosphere may, by its solvent power, raise and support the minute particles of decaying leaves and plants, with no greater heat than is necessary to produce rapid decomposition. When, by the united action of the heat and moisture of autumn and spring, the leaves are separated into minute particles, we suppose these particles may be taken up by the atmosphere, before they are entirely separated into their original elements, or permitted to form new compounds. This process goes on insensibly, until, by some atmospheric change, a condensation takes place, which renders the effluvia visible, with all the appearance and properties of smoke.

Dark Days.—It sometimes happens that the atmosphere is so completely filled with smoke as to occasion, especially when accompanied by clouds, a darkness, in the day-time, approaching to that of night. The most remarkable occurrences of this kind, within our own recollection, were in the fall of 1819, and in the spring of 1820. At both of these seasons, the darkness was so great, for a while near the middle of the day, that a book of ordinary print could not be read by the sun's light. The darkness in both cases was occasioned principally by smoke, and without any known extensive burnings; but the summer of 1819, is known to have been remarkable for the abundant growth of vegetation. But the most remarkable

* A remarkable phenomenon attending this disintegration of the ice by the influence of the sun's rays, and one which we think worthy of investigation, is its separation into parallel icicles, or canals, as they are sometimes called, extending perpendicularly from the upper to the lower surface of the ice, giving the mass, particularly the lower portions, somewhat the appearance of a honey comb.

DARK DAY.

INDIAN SUMMER.

METEORS.

darkness of this nature, which has occurred since the settlement of this country, was on the memorable 19th of May, 1780, emphatically denominated the *dark day*. The darkness at that time is known to have covered all the northern parts of the United States and Canada, and to have reached from lake Huron eastward over a considerable portion of the Atlantic ocean. It was occasioned chiefly by a dense smoke, which evidently had a progressive motion from southwest to northeast. In some places it was attended with clouds and in some few with rain. The darkness was not of the same intensity in all places, but was so great through nearly the whole of this extensive region as to cause an entire suspension of business during the greater part of the day, where the country was settled, and in many places it was such as to render candles as necessary as at midnight. Several hypotheses have been advanced to account for this remarkable darkness, such as an eruption of a volcano in the interior of the continent, the burning of prairies, &c., but by the one advanced in the preceding article, it receives an easy explication. The regions at the southwest are known to be extremely productive, and to have been, at that period, deeply covered with forest and plants, whose leaves and perishable parts would be sufficient, during their decay, to fill the atmosphere to almost any extent; and nothing more would be necessary for the production of the phenomenon, than a change of atmospheric pressure, which should produce a sudden condensation, and a southwesterly wind.

Indian Summer.—It has been said, though we do not vouch for its truth, that it was a maxim with the aborigines of this country, which had been handed down from time immemorial, that there would be 30 smoky days both in the spring and autumn of each year; and their reliance upon the occurrence of that number in autumn was such that they had no fears of winter setting in till the number was completed. This phenomenon occurred between the middle of October and the middle of December, but principally in November; and it being usually attended by an almost perfect calm, and a high temperature during the day, our ancestors, perhaps in allusion to the above maxim, gave it the name of *Indian Summer*. But it appears that from the commencement of the settlement of the country, the Indian Summers have gradually become more and more irregular and less strikingly marked in their character, until they have almost ceased to be noticed. Now upon the hypothesis advanced in the

preceding articles, this is precisely what we should expect. When our ancestors arrived in this country, the whole continent was covered with one uninterrupted, luxuriant mantle of vegetation, and the amount of leaves and other vegetable productions, which were then exposed to spontaneous dissolution upon the surface of the ground, would be much greater than after the forests were cut down and the lands cultivated. Every portion of the country being equally shielded by the forest, the heat, though less intense, on account of the immense evaporation and other concurring causes, would be more uniformly distributed, and the changes of wind and weather would be less frequent than after portions of the forests had been removed, and the atmosphere, over those portions, subjected to sudden expansions from the influence of the sun upon the exposed surface of the ground. It is very generally believed, that our winds are more variable, our weather more subject to sudden changes, our annual amount of snow less and our mean annual temperature higher than when the settlement of the country was commenced. And causes, which would produce these changes, would, we believe, be sufficient to destroy, in a great measure, the peculiar features of our Indian Summers. The variableness of the winds, occasioned by cutting down large portions of the forests, would of itself be sufficient to scatter and precipitate those brooding oceans of smoke, and prevent the long continuance of those seasons of dark and solemn stillness, which were, in ages that are past, the unerring harbingers of long and dreary winters and deluges of snow.

Meteors and Earthquakes.—Upon these subjects Vermont affords nothing peculiar. The common phenomenon of shooting stars is witnessed here as in other parts of the country, and those uncommon displays which have several times occurred about the 13th of November, have been observed from various parts of the state. In addition to these, several of those rare meteors, from which meteorolites or meteoric stones are thrown, have been noticed, but the records of them are few and meagre. These meteors make their appearance so unexpectedly and suddenly, and continue visible for so short a period of time, that it is hardly possible to make observations sufficiently accurate to furnish data for calculating their velocity, distance or magnitude. That most remarkable meteor which passed over New England in a southerly direction in the morning of the 14th of December, 1807,

REMARKABLE METEORS.

REMARKABLE METEORS.

and from which fell large quantities of meteoric stones in Weston, Connecticut, was seen from Rutland in this state, and the observation there made formed one of the elements in Dr. Bowditch's calculations of its velocity, distance and size. A meteor of the same kind passed over New England and New York in a southwesterly direction a little before 10 o'clock in the evening of the 23d of February, 1819, and was seen from many parts of Vermont. We had the pleasure of witnessing it at Bridgewater in this state. The meteor there made its appearance about 10° south of the zenith, and, descending rapidly towards the southwest, it disappeared when about 25° above the horizon. Indeed, its velocity was such over Windsor and Rutland counties as to give to all, who observed it, though at the distance of 10, 20 and even 30 miles from each other, along the line of its course, the impression that its fall was nearly perpendicular; and each observer supposed that it fell within a few hundred yards of himself. Now as this meteor was probably moving nearly parallel to the horizon, the deception must have arisen from the rapid diminution of the visible angle between the meteor and the horizon, occasioned by the great horizontal velocity of the meteor in its departure from the zenith of the observer. These facts should teach us to guard against the illusions of our own senses and to admit with caution the testimony of others respecting phenomena of this nature.

According to the best of our judgment, the meteor was visible three or four seconds, in which time it passed through an arc of near 50° of the heavens. Its apparent diameter was about $20'$, or two thirds that of the moon, and the color of its light was very white and dazzling, like that of iron in a furnace in a state of fusion. It left a long train of light behind it, and just at the time of disappearance a violent scintillation was observed, and the fragments detached continued luminous at considerable distance from the main body of the meteor, but no meteorolites are known to have fallen. Five or six minutes after the disappearance of the meteor, a very distinct report was heard accompanied by a jarring of the earth, like the report of a cannon at the distance of five or six miles. Now, assuming the correctness of the above data, and that the report was given at the time of the scintillation, the distance of the meteor was then between 70 and 80 miles, and its diameter about one third of a mile.

Another, and still more remarkable meteor, was seen from this state as well as

from the rest of New England, and from New York and Canada, about 10 o'clock in the evening of the 9th of March, 1822. From observations made at Burlington and Windsor, Prof. Dean computed its course to be S. 35° W., its distance from Burlington 59 miles and from Windsor 83 miles, and its height above the earth about 37 miles when it first appeared, and when it disappeared its distance from Burlington was 144 miles and its distance from Windsor 133 miles and its height 29 miles. According to these computations, at the first appearance of the meteor, it was vertical over the unsettled parts of Essex county in the state of New York, and at its disappearance, it was over the western part of Schoharie county in the same state.

Several other meteors of this kind have been observed, the most remarkable of which was seen from the northern part of the state and from nearly the whole of Lower Canada, about 4 o'clock in the morning of the 28th of May, 1834. It being a time when people generally were in bed and asleep, comparatively few had the opportunity of seeing it. Many, however, were awakened by its light, and still more by its report. Residing then at Hatley in Canada, which is 15 miles north of the north line of Vermont at Derby, we were suddenly awakened by a noise resembling that of a large number of heavy carriages driven furiously over a rough road or pavement, and by a shaking of the house, which caused a rattling of every door and window. Supposing it to be an earthquake, we sprung out of bed and reached the door two seconds at least before the sound ceased. The atmosphere was calm and the sky was perfectly clear, with the exception of a narrow train of cloud or smoke, extending from southwest to northeast, and at considerable distance to the northward of the zenith. It was nearly motionless, and was apparently at a vastly greater height than clouds usually lie. Indeed there was something so peculiar in its appearance as to make it the subject of remark and careful observation till after sunrise, when it gradually vanished, although at this time we had no reason to suspect its connexion with the noise and shaking of the earth, which had awakened us. We, however, soon learned that a remarkable meteor had been seen, and that its course lay along the very line occupied by the remarkable cloud above mentioned. From an intelligent young man, who was fishing at the time on Mas-sachusetts lake in Hatley, and who had a full view of the meteor during the whole time it was visible, we learned that it made its

NEW ENGLAND EARTHQUAKES.

AURORA BOREALIS.

appearance at a point a little north of west at an elevation of about 35° , passed the meridian at a considerable distance north of the zenith and disappeared in the northeast with an altitude of about 25° . He thought its apparent magnitude to be 8 or 10 times that of the moon, and that it was visible about 10 seconds. It was of a fiery red color, brightest when it first appeared; and gradually decreased in brilliancy, all the time throwing off sparks, till it disappeared. About 4 minutes after the vanishing of the meteor, a rumbling or rattling sound, which sensibly agitated the surface of the lake, commenced in the point where the meteor was first seen, and following the course of the meteor died away at the point where the meteor vanished. This meteor was vertical on a north and south line, about 50 miles to the northward of Derby in this state, or nearly over Shipton in Canada, and its altitude must have been at least 30 miles, and still the agitation it produced in the atmosphere was such as to break considerable quantities of glass in the windows at Shipton, Melbourne and some other places. The course of this meteor was mostly over an unsettled country. The most remarkable circumstances attending this meteor were the train of smoke which it left behind, and the long continued noise and shaking of the earth.

Since the settlement of New England, there have been recorded a considerable number of earthquakes, and several have been noticed in Vermont. The sound accompanying these is usually described as having a progressive motion; and that, and the shaking of the earth have been supposed to be produced by the rushing of steam through the cavities in the interior of the earth, but the effect known to have been produced by the meteor last described, furnishes strong reasons for suspecting that the cause of many, and perhaps of all the earthquakes which have occurred in New England, has been in the atmosphere above instead of the earth beneath. Had this meteor passed without being seen, the sound and shaking of the earth, which it produced, would have been regarded as a real earthquake, and its origin in the atmosphere would not have been suspected.

Aurora Borealis.—This meteor has been very common in Vermont, ever since the first settlement of the state; but in some years it is of more frequent occurrence, and exhibits itself in a more interesting and wonderful manner than in others. Its most common appearance is that of streams of white light shooting up from near the

horizon towards a point not far from the zenith; but at times it assumes forms as various and fantastic as can well be imagined, and exhibits all the colors of the rainbow. It is not uncommon that it takes the form of concentric arches spanning the heavens from west to east, usually at the north, but sometimes passing through the zenith, or even at considerable distance to the south of it. At times the meteor is apparently motionless, but it is not an uncommon thing for it to exhibit a violent undulating motion like the whipping of a flag in a brisk wind. But it is so variable in its appearance, that it is vain to attempt its description. We will, however, mention a few of the remarkable occurrences of this meteor which have fallen under our own observation, and some of the attending circumstances.

On the 12th of October, 1819, at about 7 o'clock in the evening, the Aurora Borealis assumed the form of three luminous resplendant arches, completely spanning the heavens from west to east. The lowest arch was in the north a little below the pole star, the second about midway between the pole star and the zenith, and the third 10° or 15° to the southward of the zenith. These belts gradually spread out till they became blended with each other, and the whole concave heavens was lit up with a soft and beautiful glow of white light. It would then concentrate to particular points whose brightness would equal that of an ordinary parhelion, and around them would be exhibited the prismatic colors melting into each other in all their mellow loveliness. The motions of the meteor were rapid, undulatory and from north to south varying a little towards the zenith. The sky was clear and of a deep blue color where it was not overspread by the meteor. It was succeeded in the morning of the 13th by a slight fall of snow with a northwest wind. The aurora exhibited itself in a manner very similar to the above in the evening of the 3d of April, 1820, and several times since.

But the most remarkable exhibition of this meteor, which has fallen under our own observation, was in the evening of the 25th of January, 1837. It first attracted our attention at about half past 6 o'clock in the evening. It then consisted of an arch of faint red light extending from the northwest and terminating nearly in the east, and crossing the meridian 15° or 20° north of the zenith. This arch soon assumed a bright red hue and gradually moved towards the south. To the northward of it, the sky was nearly black, in which but few stars could be seen. Next

AURORA BOREALIS.

MAGNETIC VARIATION.

to the red belt was a belt of white light, and beyond this in that direction, the sky was much darker than usual, but no clouds were any where to be seen. The red belt, increasing in width and brightness, advanced towards the south and was in the zenith of Burlington about 7 o'clock. The light was then equal to the full moon, and the snow and every other object from which it was reflected, was deeply tinged with a red or bloody hue. Between the red and white belts, were frequently exhibited streams of beautiful yellow light, and to the northward of the red light were frequently seen delicate streams of blue and white curiously alternating and blending with each other. The most prominent and remarkable belt was of a blood-red color, and was continually varying in width and intensity. At eight o'clock, the meteor, though still brilliant, had lost most of its unusual properties.

This meteor, when very brilliant, is usually regarded as an indication of an approaching storm, but, like other signs, it often fails. It is most common in the months of March, September and October, but it is not unusual in the other months.

Magnetic Variation.—Very few observations have hitherto been made in Vermont for the purpose of determining the variation of the magnetic needle, and these few have generally been made with a common surveyor's compass, and, probably, in most cases, without a very correct determination of the true meridian; and hence they cannot lay claim to very minute accuracy. But since such observations may serve to present a general view of the amount and change of variation, since the settlement of the state, we have embodied those to which we have had access, in the following table.

Magnetic Variation in Vermont.

Place of Observation.	Date.	Vari. west.	Latitude.	Lon. w. G'l.	Authorities.
Burlington,	1793	7° 38'	44° 28'	73°	Dr. S. Williams.
"	1818	7 30	"	"	J. Johnson, Esq.
"	1822	7 42	"	"	"
"	1830	8 10	"	"	"
"	1831	8 15	"	"	"
"	1832	8 25	"	"	"
"	1834	8 50	"	"	"
"	1837	8 45	"	"	Prof. Benedict.
"	1840	9 42	"	"	J. Johnson, Esq.
Rutland,	1789	7 3	43 37	72	Dr. S. Williams.
"	1810	6 4	"	"	"
"	1811	6 1	"	"	"
Ryegate,	1801	7 0	44 10	72	Gen. J. Whitelaw,
Holland,	1785	7 40	45 0	71	"
St. Johnsbury,	1837	9 16	44 26	71	Prof. A. C. Twining.
Barton,	1837	10 51	44 44		"
Montpelier,	1829	12 25	44 17	72	Exec. Documents.
Pownal,	1786	5 52	42 46	72	Dr. S. Williams.
Canaan,	1806	9 00	45 0	71	"

From repeated observations and from a careful examination of the lines of the original surveys, John Johnson, Esq. was of the opinion that in 1785, the westerly variation at Burlington was about 7° 12' and that it diminished till the year 1805 when it was about 6° 12'. From 1805 the variation has been increasing up to the present time, 1842; and is now 9° 54. This would give a mean annual change of variation of 6' since 1805, and of 3' previous to that time. And although he thought the change of variation may not have been perfectly uniform, yet he was of opinion that a table constructed with the above variation would not differ materially from the truth. The following is such a table.

Magnetic Variation at Burlington.

Year.	Var. w	Year.	Var. w	Year.	Var. w	Year.	Var. w
1785	7° 12'	1800	6° 27'	1815	7° 12'	1830	8° 42'
1786	7 9	1801	6 24	1816	7 18	1831	8 48
1787	7 6	1802	6 21	1817	7 24	1832	8 54
1788	7 3	1803	6 18	1818	7 30	1833	9 0
1789	7 0	1804	6 15	1819	7 36	1834	9 6
1790	6 57	1805	6 12	1820	7 42	1835	9 12
1791	6 54	1806	6 18	1821	7 48	1836	9 18
1792	6 51	1807	6 24	1822	7 54	1837	9 24
1793	6 48	1808	6 30	1823	8 0	1838	9 30
1794	6 45	1809	6 36	1824	8 6	1839	9 36
1795	6 42	1810	6 42	1825	8 12	1840	9 42
1796	6 39	1811	6 48	1826	8 18	1841	9 48
1797	6 36	1812	6 54	1827	8 24	1842	9 54
1798	6 34	1813	7 0	1828	8 30	1843	10 0
1799	6 30	1814	7 6	1829	8 36	1844	10 6

REMARKABLE SEASONS.

GREAT FRESHET.

COMPARISON OF CLIMATES.

Remarkable Seasons.—Although the mean temperature of Vermont has not usually varied much from year to year, yet seasons have occasionally occurred, which became, for a time, proverbial on account of their unusual coldness, or heat, or on account of an excess or deficiency of snow or rain. Of the years, which were remarkable on any of these accounts in early times, we have no accurate records. But it is universally conceded that the year 1816, was the coldest, and perhaps the driest during the early part of summer, ever known in Vermont, although we have no meteorological observations for that year, and are therefore unable accurately to compare the temperature of its seasons with other years. Snow is said to have fallen and frosts to have occurred at some places in this State in every month of that year. On the 8th of June, snow fell in all parts of the State, and upon the high lands and mountains, to the depth of five or six inches. It was accompanied by a hard frost, and on the morning of the 9th, ice was half an inch thick on shallow, standing water, and icicles were to be seen a foot long. The weather continued so cold that several days elapsed before the snow disappeared. The corn, which was up in many places, and other vegetables, were killed down to the ground, and, upon the high lands, the leaves of the trees, which were about two thirds grown, were also killed and fell off. The summer was not only excessively cold, but very dry. Very little Indian corn came to maturity, and many families suffered on account of the scarcity of bread stuffs and their consequent high prices.

The year, 1828, was nearly as remarkable for warmth as 1816 was for cold. The mean temperature of all the months of this year, with the exception of April, was higher than their average mean, and the temperature of the year 3° higher than the mean of the annual temperatures which have been observed. The broad parts of lake Champlain were not frozen over during the winter.

The year 1830 was distinguished on account of the great quantity of water which fell in rain and snow, and especially for one of the most extensive and destructive freshets ever known in Vermont. Up to the 15th of July, the weather was exceedingly cold as well as wet. It then changed, and became suddenly and excessively warm. The following table shows the height to which the thermometer rose in the shade, on each day from the 15th of July to the 21st, inclusive.

July 15.	Thursday,	. . .	94°
" 16.	Friday,	. . .	92
" 17.	Saturday,	. . .	92½
" 18.	Sunday,	. . .	92
" 19.	Monday,	. . .	90
" 20.	Tuesday,	. . .	91
" 21.	Wednesday,	. . .	94

Nor was the heat much diminished in the absence of the sun. In some cases the thermometer stood as high as 80° during the whole night, and it sunk but little below 80° during any part of the time included in the above table. Another such succession of hot days and nights was perhaps never experienced in the state. From the 15th up to Saturday the 24th, the weather was for the most part clear and calm. On Saturday afternoon, the rain commenced and continued with only short intermissions, till Thursday following. During the 5 days from Saturday noon to Thursday noon, the fall of water at Burlington, exceeded 7 inches, and of this 3.85 inches fell on the 26th in the space of about 16 hours, and this is believed to be one of the greatest falls of water, in that length of time, ever known in Vermont. The Winooski, which was most affected of any of our large streams, was at its greatest height in the afternoon of Tuesday the 27th, and was then from 4 to 20 feet, according to the width of the channel, higher than had ever before been observed. Although the county of Chittenden, and the northern parts of the county of Addison, seemed to be the section upon which the storm spent its greatest force, yet its disastrous effects were felt with unusual severity throughout the valley of lake Champlain, and in all the northern and central parts of the state, and the destruction of property in bridges, mills, buildings and growing crops was great, almost beyond computation. But its most melancholly effect was the destruction of human life. By a change of the channel of New Haven river, in the town of New Haven, during the night, between the 26th and 27th, several buildings containing families were insulated, and afterwards swept away by the waters. Of 21 persons, who were thus surprized and washed away, 7 only escaped; the remaining 14 found a watery grave.*

The whole quantity of water which fell at Burlington, in 1830, measured 59.3 in. being half as much again as the mean annual quantity, and probably exceeding the amount in any other year since the state was settled.

Comparative view of the Climate.—As Vermont extends through 2° 16' of latitude, there is, as might be expected, a

* See part III. Article, New Haven.

CLIMATE OF AMERICA AND EUROPE.

CAUSES OF DIFFERENCE.

sensible difference between the temperature of the northern and southern parts, and there is a difference still more marked between the elevated and mountainous parts and the lower country along our lakes and rivers; but observations are too limited to enable us to form any accurate comparison between the different sections of the state.* Between the climate of this state and that of those portions of other states, lying in the same latitude, there is no material difference, with the exception, perhaps, of the sea-coast of New Hampshire and Maine, whose mean annual temperature may be a little higher. But between Vermont and the countries of Europe, lying in the same latitude, there is a remarkable difference, the temperature of the latter being no less than $11\frac{1}{2}$ ° higher than ours; and there is a like contrast, increasing towards the north, between the whole western coast of Europe and the eastern coast of North America.

This singular contrast was observed by the earliest navigators, who visited the coast of North America, and has since been confirmed by numerous meteorolog-

* As the extremes of heat and cold were not noted in the preceding meteorological tables, we have collected in the following table the extremes of cold which have been entered at sun-rise upon journals kept at three different places within the state since 1829. Degrees in all cases below zero.

Year.	Williamstown.	Burlington.	Hydepark.
1829	Feb. 5, 11°		
1830	Jan. 31, 22		
1831	Dec. 22, 18	Dec. 14°, 14°	
1832	Feb. 24, 22	Jan. 26, 16	
1833	Jan. 19, 26	Jan. 19, 20	Dec. 15, 12°
1834	Dec. 15, 18		Jan. 24, 26
1835	Feb. 4, 24		Jan. 4, 36
1836	Feb. 2, 26		Feb. 18, 34
1837	Jan. 4, 16	Dec. 22, 15	Jan. 26, 34
1838	Dec. 13, 15	Jan. 21, 13	Feb. 2, 22
1839	Jan. 24, 24	Jan. 24, 16	Feb. 10, 22
1840	Jan. 16, 17	Jan. 18, 16	
1841	Feb. 9, 9	Jan. 4, 10	

It would appear from various observations and circumstances, that during calm weather, when the sun does not shine, the temperature of vallies and low situations is lower than that of the high lands, but in windy weather and when the sun shines, it is coldest on the high lands. In confirmation of this statement, in part, we give the following extract of a letter to the author from the Hon. Elijah Paine, of Williamstown, (see pages 9 and 10.) "I have found," says he, "that in extremely cold, still weather, the mercury in the thermometer at Burlington, Montpelier, at Northfield, on Dog river, on the low lands at the meeting-house in this town, at Woodstock, Hanover, N. H., and even at Albany, N. Y., has sometimes been 14 degrees lower than in mine. Sometimes, even in March, I have found the difference equally great, when the wind was light and the weather very cool for the season. But the reverse is the case in extremely cold, windy weather. I have known my thermometer in such weather 11 degrees lower than some of those I have mentioned."

ical observations. A comparison of the journals kept in this country with those kept in Europe shows us that the climate of Vermont, which lies in the latitude of the southern part of France, is as cold as that of Denmark, situated 11 or 12° further north. The following table exhibits pretty nearly the mean temperatures along the coasts of the two continents, with the differences, from the 30th to the 60th degree of latitude.

Table.

Latitude.	Europe. Mean Temp.	America. Mean Temp.	Differences.
30°	70.1°	66.8°	3.3°
35	66.5	60.5	6.0
40	63.1	54.2	8.9
45	56.8	45.0	11.8
50	50.8	37.9	12.9
55	46.0	28.0	18.0
60	40.0	18.0	22.0

A contrast so remarkable, as is exhibited in the preceding table, has been the source of much speculation, but, as it appears to us, without throwing much light upon the true cause of the phenomenon.

Among the earliest writers who attempted to account for it was Father Bresani, an Italian Jesuit, who spent most of his life in Canada. He says that "a certain mixture of dry and moist makes ice, and that in Canada there is a remarkable mixture of water and dry sandy soil; and hence the long duration of cold and great quantities of snow." To this he adds another cause, which is "the neighborhood of the northern sea, which is covered with monstrous heaps of ice, more than 8 months of the year." Father Charlevoix, who visited Canada in 1720, and from whose travels the forgoing opinions of Bresani are taken, says* that, in his opinion, "no person has explained the cause, why this country is so much colder than France in the same latitude." "Most writers," he continues, "attribute it to the snow lying so long and deep on the ground. But this only makes the difficulty worse. Whence those great quantities of snow?" His own opinion is that the cold and snow are to be attributed to the mountains, woods and lakes. Many European writers have supposed the great lakes, which abound in the country, to be the cause of the coldness of our climate; while others have imagined that there must be a chain of very high mountains in the interior of the continent, running from southwest to northeast, which produce the coldness of our north westerly winds. Doct. Dwight supposes these

* Charlevoix's Travels in America, Vol. 1. p. 126

CHANGE OF CLIMATE.

winds to be descending currents from the higher regions of the atmosphere; and hence their coldness. Doct. Holyoke attributed the coldness of our climate to the extensive forests of evergreens. Doct. Williams, the able historian of Vermont, attributed it to the forest state of the country, and has endeavoured to prove that, eighteen centuries ago, the climate of Europe was even colder than that of America at the present time.* But other writers have, with equal plausibility, shown that no considerable change has taken place in the mean temperature of Europe within that period.† The fact, moreover, that the western coasts of America, which are wholly uncultivated, are very much warmer than the eastern coasts of Asia in the same latitude, which are cultivated to considerable extent, shows that these differences of temperature do not depend upon cultivation, nor, indeed, upon any of the causes which have been mentioned, but upon some more general cause. And this cause, we believe, is to be sought in the influence of the ocean upon the prevailing winds in high northern latitudes. We regard the ocean as the great equalizer of temperature upon the surface of our globe—as the instrument for distributing the heat of the equatorial regions towards the poles and bringing thence cold towards the equator, and thus meliorating the climate of both. We look upon it as a truth established both by theory and fact that there is a general circulation of the waters of the ocean between the equatorial and polar regions—that the warm water from the equator is flowing along the surface of the ocean towards the poles, while the colder water from the poles is advancing along the bottom of the ocean towards the equator. Such a motion of the waters might be inferred, as the result of the unequal distribution of heat through the oceanic mass, increased by the rotation of the earth on its axis. But independent of this, facts furnish indubitable proof of its existence. The temperature of the earth, at a distance below the surface, being a pretty correct index of the mean temperature of the climate, without the circulation we have supposed, the temperature of the ocean at considerable depths, ought, particularly in the warmer parts of the year, to be as high, at least, as the mean annual temperature. But on the contrary, observation proves it to be much lower. In latitude 67°, where the mean temperature is 39°, Lord Mulgrave found, on the 20th

CURRENTS OF THE OCEAN.

of June, when the temperature of the air was 48½°, that the temperature of the ocean at the depth of 4660 feet, was 26°, or 6° below the freezing point. On the 31st of August, in latitude 69° where the annual temperature is 38°, that of the air being 59½°, the temperature of the water at the depth of 4088 feet was 32°.* At the tropic where the temperature does not vary more than 7° or 8° during the year, at the depth of 3600 feet the temperature of the water was found to be only 53°, while that of the air was 84°, making a difference of 31°, and indicating a degree of cold in the lower parts of the ocean nearly 25° more intense than is ever experienced in the atmosphere in that latitude.† How else can we account for the coldness of these waters, but by supposing them to come from higher latitudes in the manner we have described?

Of the opposite motion of the warmer waters along the surface of the Atlantic ocean, from the equatorial towards the polar regions, the gulf stream, the currents setting along the western coasts of Norway, and the vast quantities of tropical productions, lodged upon the coasts and islands of the northern ocean, afford abundant proof.

Now this transportation of the colder waters towards the equator and of the warmer waters towards the poles, serves, as already remarked, to mitigate the otherwise intolerable heat of the former, and the excessive cold of the latter; and affords an obvious manifestation of the wisdom and goodness of providence. And it is to the influence of the warm superficial waters of the ocean, which have come from tropical regions, upon the winds, or currents of the atmosphere, that we are to look for the cause of the difference of temperature in the climate of the eastern coasts of North America and the western coasts of Europe, and also in that of the eastern coasts of Asia and the western coasts of North America. If we observe the gulf stream, which is only a concentration by the trade winds of those warm waters which are flowing northerly along the surface of the ocean, we shall perceive it to be very narrow, presenting to the atmosphere only a small surface of its warm water, while near the American coast. But as it proceeds to the northeast its warm waters are spread out upon the surface of the ocean and are thrown directly along or upon the western coasts of Europe. Observation also shows that the prevailing winds in high northern latitudes, are from a north west-

* Williams' History of Vermont, Vol. I, p. 475.
† Edinburgh Review, Vol. XXX, p. 25.

* Count Rumford's Essays, Vol. II. page 304.
† Phil. Transactions, 1752.

erly direction, or passing nearly at right angles across the great northeasterly current of the ocean, and we believe it to be the influence of these warm waters of the ocean upon the westerly and northwesterly winds, which produces the phenomenon in question. On the eastern coasts of North America, these winds come from mountainous, snowy regions, or from lakes and seas, which are covered with

ice the greater part of the year; and hence they are excessively cold. In their progress over the Atlantic, they are gradually warmed by imbibing heat from the surface of the ocean, so that when they arrive upon the continent of Europe, their temperature is so much elevated as to produce the remarkable difference observed between the climates of the coasts of the two continents.*

CHAPTER II.

QUADRUPEDS OF VERMONT.

Preliminary Observations.

All animals are divided by Baron Cuvier, the celebrated French naturalist, whose arrangement we shall endeavor mainly to follow, into four general divisions, viz. I. *Vertebrated animals*, or such as have a spine, or back bone, II. *Moluscons animals*, or such as have no skeleton, III. *Articulated animals*, whose trunk is divided into rings, and IV. *Radiated animals*, or zoophytes. The first division embraces the mammalia, the birds, the reptiles and the fishes; the second, the shell fishes; the third, the insects, and the fourth, polypi. In this work we shall attempt but little beyond an account of our vertebrated and moluscons animals.

MAMMALIA.

The Mammalia are such animals as suckle their young, and are divided by Cuvier into the following orders:

I. *Bimana*—having two hands and three kinds of teeth. Man is the only species.

II. *Quadrupana*—animals having four hands and three kinds of teeth. Monkeys and baboons belong to this order.

III. *Carnivora*—having three kinds of teeth and living principally upon animal food, as the dog, cat, &c.

IV. *Marsupialia*—producing their young prematurely and bringing them to perfec-

tion in an abdominal pouch, which incloses the teats, of which the opossum is an example.

V. *Rodentia*—have large incisory teeth suitable for gnawing, and grinders with flat or tuberculated crowns, but no canine teeth, as the rat, beaver, &c.

VI. *Edentata*—having no incisory teeth in either jaw, and in some genera no teeth at all, of which the sloth and ant eater are examples.

VII. *Pachydermata*—having either three or two kinds of teeth, toes variable in number and furnished with strong nails or hoofs, and the digestive organs not formed for ruminating, as the horse, elephant and hog.

VIII. *Ruminantia*—having no incisory teeth in the upper jaw, cloven hoofed feet, and four stomachs fitted for ruminating, or chewing the cud, as the ox, sheep, deer, &c.

IX. *Cetacea*—Aquatic animals having their bodies shaped like fishes, as the whale, dolphin, &c.

Of these nine orders of animals, only three are found in Vermont, in a wild state. These are the *Carnivora*, the *Rodentia* and the *Ruminantia*. We have one order more, the *Pachydermata*, among our domestic quadrupeds, including the horse, ass and hog.

* Mr. Daniels in his meteorological essays endeavors to account for the higher temperature of the western coasts of continents in a different manner. He supposes the northwesterly winds to arrive loaded with vapor and that the caloric, liberated by its condensation, raises the general temperature of the atmosphere on the western coast; but, as the winds proceed eastward, they become dryer and when they reach the eastern

coasts contain little vapor to be condensed, and consequently do not produce an elevation of temperature. If this were the principal cause of the phenomenon under consideration, the quantity of rain on the western coasts should be greater than upon the eastern in proportion as the temperature is higher, but so far as observations extend the reverse of this seems to be true, the quantity of rain on the eastern coast being greatest.

QUADRUPEDS OF VERMONT.

The following is a catalogue of the native quadrupeds of Vermont, arranged in the order, in which they are described in the following pages:

ORDER CARNIVORA—Carnivorous Animals.

<i>Vespertilio subulatus</i> ,	Say's Bat.
" <i>pruinus</i> ,	Hoary Bat.
" <i>carolinensis</i> ,	Carolina Bat.
" <i>noctivagus</i> ,	Silver-haired Bat.
<i>Sorex Forsteri</i> ,	Forster's Shrew.
" <i>brevicaudus</i> ,	Short tail Shrew.
<i>Scalops canadensis</i> ,	Shrew Mole.
<i>Condylura macroura</i> ,	Star-nosed Mole.
<i>Ursus americanus</i> ,	Black Bear.
<i>Procyon lotor</i> ,	Raccoon.
<i>Gulo luscus</i> ,	Wolverene.
<i>Mustela vulgaris</i> ,	Weasel.
" <i>erminea</i> ,	Ermine.
" <i>vison</i> ,	Mink.
" <i>canadensis</i> ,	Fisher Martin.
" <i>martes</i> ,	Pine Martin.
<i>Mephitis americana</i> ,	Skunk.
<i>Lutra brasiliensis</i> ,	American Otter.
<i>Canis lupus</i> ,	Wolf.
" <i>fulvus</i> ,	Red Fox.
" <i>var. decussatus</i> ,	Cross Fox.
" <i>var. argentatus</i> ,	Black or Silver Fox.
<i>Felis canadensis</i> ,	Lynx.
" <i>rufa</i> ,	Bay Lynx.
" <i>concolor</i> ,	Catamount.
<i>Phoca vitulina</i> ,	Common Seal.

ORDER RODENTIA—Gnawing Animals.

<i>Castor fiber</i> ,	Beaver.
<i>Fiber zibethicus</i> ,	Musk Rat.
<i>Arvicola riparius</i> ,	Meadow Mouse.
<i>Mus decumanus</i> ,	Norway Rat.
" <i>rattus</i> ,	Black Rat.
" <i>musculus</i> ,	Common Mouse.
<i>Gerbillus canadensis</i> ,	Jumping Mouse.
<i>Arctomys monax</i> ,	Woodchuck.
<i>Sciurus cinereus</i> ,	Gray Squirrel.
" <i>niger</i> ,	Black Squirrel.
" <i>hudsonius</i> ,	Red Squirrel.
" <i>striatus</i> ,	Striped Squirrel.
<i>Pteromys volucella</i> ,	Flying Squirrel.
<i>Hystrix dorsata</i> ,	Hedge Hog.
<i>Lepus americanus</i> ,	Rabbit.
" <i>virginianus</i> ,	Hare.

ORDER RUMINANTIA—Ruminating Animals.

<i>Cervus alces</i> ,	Moose.
" <i>canadensis</i> ,	Elk.
" <i>virginianus</i> ,	Common Deer.

ORDER CARNIVORA.

The animals of this order have three kinds of teeth, a simple, membranaceous stomach, and short intestines. They live principally on flesh, or animal food.

GENUS VESPERTILIO.—Linnaeus.

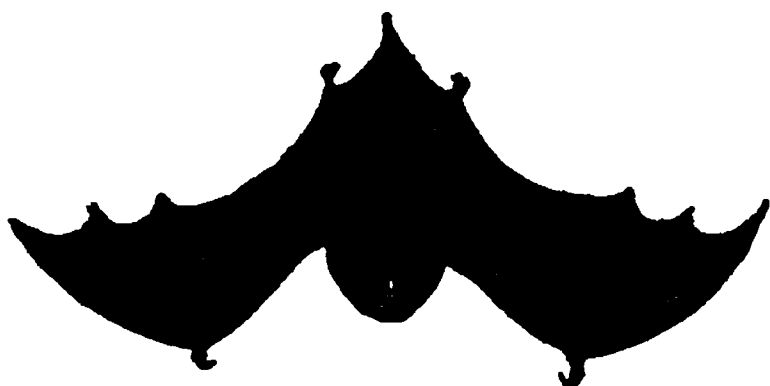
Generic Characters.—Teeth from 32 to 36,—incisors $\frac{1}{2}$, canines $\frac{1}{2}$ — $\frac{1}{2}$, grind. $\frac{1}{2}$ — $\frac{1}{2}$, $\frac{1}{2}$ — $\frac{1}{2}$ to $\frac{1}{2}$ — $\frac{1}{2}$. Upper incisors in pairs, cylindrical and pointed; the anterior grinders simply conical, posterior having short points or prominences. Nose, simple, without grooves, or wrinkles; ears, with an auriculum, lateral and more or less large; tongue smooth, and not protractile; index finger with but one phalanx, the middle with three, the annular and little finger with two; tail comprised in the interfemoral membrane; sebaceous glands under the skin of the face, which vary in different species.

The bats consist of a great number of species, but they agree very nearly in their general form and habits. They produce and nourish their young in the manner of other quadrupeds, but unlike them they are furnished with delicate membranous wings upon which they spend much of their time in the air, thus seeming to form the connecting link between the quadrupeds and birds. They are nocturnal in their habits, lying concealed during the day, but venturing abroad on the approach of evening, during the early part of which they may be seen flitting lightly and noiselessly through the air in quest of food, which consists chiefly of insects. At such times they often enter the open windows of our dwellings and sometimes commit depredations upon our larders, being exceedingly fond of fresh meat. Their nocturnal habits manifest themselves in the domesticated state as well as the wild, and it is with difficulty that they are made to mount upon their wings, or take food during the day, but in the evening they devour food voraciously and fly about the room without reluctance. On the approach of winter bats retire to dry caverns and hollow trees where they suspend themselves by the hooked nails of their hind feet, and thus remain in a torpid state during the winter. They void their excrement, which is found in abundance in these retreats, by reversing their position and suspending themselves by the hooks upon their thumbs till their object is accomplished, when they resume their former position. Bats produce their young in June or July, and have from one to three at a time. The teats of the female are situated on the chest and to these, as we are assured by Dr. Godman, (Nat. His. I. 56.), the young attach themselves so firmly as to be carried about by the mother in her flight, till they have attained a considerable size. The four following species are all that have hitherto been distinguished in Vermont. It is, however, probable that others may hereafter be detected.

SAY'S BAT.

HOARY BAT.

CAROLINA BAT.



SAY'S BAT.

Vespertilio subulotus.—SAY.

DESCRIPTION.—Head short, broad and flat; nose blunt with a small, flat, naked muzzle; eyes small, situated near the ears and covered with fur; ears longer than the head, thin ovate, obtuse and hairy at the base behind; tragus thin, broadly subulate below, tapering upwards and ending in an obtuse tip, at about two thirds the height of the ear; color of the back yellowish brown, the belly yellowish gray; fur soft and fine, and blackish towards the roots; head covered with fur, excepting about the nostrils; color blackish about the mouth; whiskers few, short and stiff; membrane between the hind legs broad, thinly covered with fur next the body, and tapering to a point near the extremity of the tail, which it envelopes; toes of the hind feet long; hooked thumb including the nail $\frac{1}{4}$ of an inch. Length of the specimen before me, from the nose to the insertion of the tail, 2 inches; tail $1\frac{1}{4}$ inches; spread of the wings, 10 inches.

HISTORY.—This Bat seems to be distributed very generally through the continent. It was first described scientifically by Mr. Say, in the notes to the account of Long's expedition, from a specimen obtained at the foot of the Rocky Mountains. It was afterwards minutely described by Dr. Richardson from specimens obtained on the upper branches of the Saskatchewan and Peace rivers.* Specimens have since been obtained from Labrador, Georgia, Ohio, New Hampshire and Columbia river. It is one of the smallest, and, I think, the most common Bat found in Vermont, especially in the central mountainous parts, where it enters the houses in the evening and is easily captured. The specimen, from which my description was drawn was taken in Waterbury.

THE HOARY BAT.

Vespertilio pruinosis.—SAY.

DESCRIPTION.—Ears broad, shorter than the head, broadly emarginate behind, hairy on the outside more than half the length,

and at the central part of the inside, tragus bent, club-shaped and blunt at the tip. Canine teeth large and prominent; incisors in the upper jaw conical with a tubercle near the base, very near the canines, and nearly in a line with them; snout cartilaginous and moveable; nostrils wide apart. Eyes black and prominent. Fur on the body blackish brown at its base, then pale brownish yellow, then brownish and terminated with clear, delicate white, like hoar frost; fur on the throat, on and about the ears, and on the inside of the wings towards their base, fulvous; snout, chin, margin of the ears and the posterior part of the wing membrane, blackish; the anterior part of the wings and the base of the fur on the interfemoral membrane, dark chestnut. Tail, wholly embraced in the interfemoral membrane, which is thickly covered with fur, except at the very posterior extremity. Length of the specimen before me, from the snout to the extremity of the tail, $5\frac{1}{2}$ inches; spread of the wings, when fully extended, $16\frac{1}{2}$ inches.

HISTORY.—This bat was also first described by Say in Long's expedition and has since been minutely described by Richardson,* Coopers and others. It has been found in most parts of the United States and was obtained by Dr. Richardson as far north as lat. 54° . It is not common in Vermont, but is occasionally met with. The only Vermont specimen, which I have examined, and that from which the preceding description was drawn, was sent me alive by my friend, David Reed, Esq., of Colchester. It was taken at his place in Colchester the latter part of October, 1841, and was kept alive for some time in a large willow basket with a flat cover of the same material. On opening the basket, he was almost invariably found suspended by his hind claws from the central part of the cover. When the basket was open, he manifested little fear, or disposition to fly, or get away, during the day time, but in the evening would readily mount on the wing and fly about the room, and on lighting always suspended himself by his hind claws with his head downward. He ate fearlessly and voraciously of fresh meat when offered to him, but could not be made to eat the common house fly.

CAROLINA BAT.

Vespertilio carolinensis.—GEOFFROY.

DESCRIPTION.—Ears rather large and naked, except on the back side near the

* Fauna Boreali Americana, part 1. p. 4.

* Fauna Boreali Americana I. p. 1.

† Annals N. Y. Lyceum of Nat. Hist. Vol. IV, 34.

SILVER-HAIRED BAT.

head, emarginate on the outer posterior edge, tragus shorter and less pointed than in Say's Bat. Head long and narrow; canine teeth very prominent; snout, interfemoral and wing membranes black and entirely naked; a few scattering hairs on the feet. Fur on the head and back long and color uniform bright ferruginous; beneath yellowish brown; last joint of the tail not enveloped in the membrane. Bones supporting the membrane very apparent. Length of the specimen before me, from the snout to the extremity of the tail 4.7 inches, head and body 3 inches, tail 1.7, fore arm 1.8, tibia .7, spread of the wings 11.5 inches.

HISTORY.—Of the history of this bat I know nothing. It is said to be quite common in the southern states particularly in the Carolinas and Georgia and also on Long Island near New York. The only specimen I have seen and that from which the above description was made, was taken in Burlington, and deposited in the museum of the college of Natural History of the University of Vermont by Mr. John H. Morse, a student of the University. A Vermont specimen of this species is also preserved in the museum of Nat. His. of Middlebury college.

SILVER-HAIRED BAT.

Vespertilio noctivagans.—LE CONTE.

DESCRIPTION.—Ears dusky black, rather large, naked on the anterior portion, somewhat ovate and obtuse, with two emarginations, on the outer posterior border, produced by two plaits; naked within, and with the tragus moderate, ovate and obtuse. Color above, a uniform dark dusky brown, approaching to black. On the back the fur is somewhat glossy and tipped with silvery white, forming an interrupted line across the shoulders, and thence irregularly mixed down the centre of the back. Interfemoral membrane thickly hairy on the upper part becoming thinner downward and naked near the border. Tip of the tail projecting about a line beyond the membrane. Feet hairy. Wing membrane entirely naked. Beneath very similar to the upper parts, though the light colored tips of the hairs are more yellowish. Total length 3.8 inches, tail 1.5, fore-arm 1.8, tibia .8, spread of the wings 11 inches.

HISTORY.—This Bat I have not seen in Vermont, but I am informed by my friend Prof. Adams that there is a specimen of it, which was taken in this state, in the museum of Natural History of Middlebury College. The above is Mr. Cooper's

Annals N. Y. Lyceum Nat. His. Vol. IV. p. 9.

FORSTER'S SHREW.

description of this Bat*, who says that "it was first described in 1831 by Major Le Conte and Dr. Harlan, and that it may be easily recognized by its dark black-brown fur tipped with white on the back." It was named *V. noctivagans* by Le Conte and *V. Audiboni*, by Harlan, and the former of these names is retained, because Le Conte's account was first published.

GENUS SOREX.—Linnaeus.

Generic Characters.—Teeth variable from 26 to 34. The two middle upper incisors hooked and dentated at their base; the lower ones slanting and elongated; lateral incisors small, usually five on each side above, and two below; grinders, most commonly 4 on each side above, and 3 below. The body is covered with fine, short fur; toes, five on each foot, separate, furnished with hooked nails not proper for digging: head and nose elongated, the latter moveable; ears short and rounded; eyes small but visible.



FORSTER'S SHREW.

Sorex Forsteri.—RICHARDSON.

DESCRIPTION.—Color yellowish brown or dark olive above, bluish white or cinerous beneath; base of the fur plumbeous for two thirds its length both above and below; teeth white at the base and at their points, deep chestnut brown; tail long, four sided, covered with short hair and terminated in a fine pencil of hairs; feet small, light flesh-colored and nearly naked; nails slender and white; whiskers half an inch long, light brown. Length of the head and body 2 inches, tail 1.4, head .9, from the eye to the point of the nose .3.

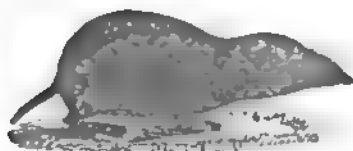
HISTORY.—This little animal is occasionally met with in our pastures and fields, having their places of retreat in stone walls and under old fences and logs. The specimen from which the above description was made was taken in Bridgewater and is now in my possession. This shrew was first described by Dr. Richardson who says that it is common throughout the fur countries, even as far north as the 67° of latitude and that its delicate foot-steps are often seen imprinted on the snow when the temperature is 40 or 50° below zero.* It is also found according to Dr. Bachman on Long Island in the vicinity of New York.†

*Fauna Boreali, vol. I. page 6.

†Journal Acad. Nat. Sci. of Phil. vol. VII. p. 396.

SHORT-TAILED SHREW.

SHREW MOLE.



THE SHORT-TAILED SHREW.

Sorex brevicaudus.—Say.

DESCRIPTION.—Color of the head, body and tail dark plumbeous brown above, a little lighter beneath; lips naked fleshy and flesh-colored; extremity of the snout brown, notched; teeth tipped with dark chestnut brown at their points fading into white at their base; feet flesh-colored, nearly naked and slender, nails slender, white on the fore feet, and on the hind feet chestnut brown at the base and white at the tip. The inner toe on each foot is shortest, the outer a little longer and the other three nearly equal, the third being a little the longest. The tail is squarish, largest in the middle, slightly strangulated at the base and sparsely covered with short hairs; whiskers whitish, sparse, half an inch long, situated between the eye and the snout and turned backwards. No external ear, opening large. Total length of the specimen before me 4.8 inches, to the origin of the tail 3.8, tail 1, head 1.1, hind foot to the point of the longest nail .6.

HISTORY.—This species of Shrew bears a very considerable resemblance to the Shrew mole in its general appearance, but is much inferior to it in size, and differs from it remarkably in the structure of its fore feet. As they seldom venture into cleared fields, very little is known of their habits, but in the woods they are often seen and heard rustling among the leaves and digging little holes into the ground, probably in quest of food. This and the preceding species are occasionally caught and brought in by cats; but they will seldom attempt to eat them on account, probably, of their disagreeable musky odor. In addition to the foregoing we certainly have one other species, and probably more, but they require further examination.

GENUS SCALOPE.—Cuvier.

Generic Characters.—Teeth 26 to 44—Incisors 2, canines 2-3 or 3-4, grinders 2-3, or 3-4, crowns of the grinders furnished with sharp tubercles; nose long and pointed; eyes very small; no external ears; fore feet very broad and strong, with long flattened nails fit for excavating the earth; hind feet small and thin, with slender, arched nails; tail short; body thickly covered with fine, soft fur, which is perpendicular to the skin; feet five toed.



THE SHREW MOLE.

Scalops aquaticus.—Linnaeus.*Scalops canadensis*.—Desmarest.

DESCRIPTION.—Color, grayish brown; body, plump, cylindrical and tapering from the shoulders backward; nose long, terminated by a button shaped cartilage; eyes and ears concealed by the fur; fore feet broad and strong, with the toes united up to the roots of the nails; nails broad, flat and strong; palms naked, bordered by small stiff hairs, above slightly covered with grayish down; hind legs and feet slender and delicate, with slender, sharp, hooked nails, tail short and covered with hair. Length of the specimen before me, from the nose to the insertion of the tail, 5.3 in. tail 1 in. head 1.3 in.

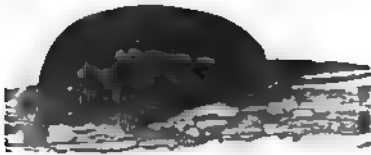
HISTORY.—The Shrew Mole inhabits fields and meadows, but seems to prefer the banks of rivers and other water courses. In its habits it resembles the other moles. Its large and powerful paws are well calculated for digging in the earth, and by their aid it is enabled to burrow with surprising quickness. They spend most of their time in the ground, where they form extensive and connected galleries, through which they can range at pleasure to considerable distances and in various directions, without coming to the surface. In excavating these galleries, they throw up, in a manner difficult to be explained, little mounds of loose earth, by which their burrows may be detected. These mounds occur at distances, from one to three feet, and are from three to six inches in height, but exhibit externally no appearance of passages into the burrows. The fur of this animal is exceedingly beautiful, being thick, fine, soft and even, with delicate glossy, or silvery reflections.

GENUS CONDYLURA.—Illiger.

Generic Characters.—Teeth 40—Incisors 2, canines 2-3, grinders 2-3. In the upper jaw are two large, triangular incisors, two very small ones, and on each side a large, strong canine. In the lower jaw the four incisors slant forward, and the canine on each side is small and pointed. Body cylindrical, clumsy, and covered with short thick fur, which is perpendicular to the skin; nose elongated and sometimes furnished with a membranous crest disposed in the form of a star around the nostrils; feet five-toed; fore feet broad and strong, fitted for digging; hind feet slender; eyes very small; no external ear.

STAR-NOSED MOLE.

THE BLACK BEAR.



THE STAR-NOSED MOLE.

Condylura macrochaeta.—HARLAN.

DESCRIPTION.—Color dark brown approaching to black, body cylindrical; nose long, tapering and surrounded at the extremity by a fringed membrane, having twenty points; tail nearly as long as the body, stragulated at the base and then becoming suddenly enlarged as if swollen and thence tapering to a point. The tail is scaly and sparsely covered with stiff hairs. The fore legs very short; the paws large and naked, excepting the edges, which are fringed with stiff hairs; nails long and flat with cutting edges. The hind feet are naked, long and narrow, and the nails long, slender and sharp resembling birds claws; eyes concealed and very small; no external ear, 4 pectoral mammae; length from the nose to the insertion of the tail 4.7 inches, tail 2.8 inches, head .7 inches, longest nail .3 inches, hind foot 1.

HISTORY.—This animal being rare, its habits are not well understood. They appear, however, from what is known of them, to be similar to those of the other moles. They are usually found about old buildings, fences and stone-walls, and they occasionally find their way into cellars of dwelling houses. I have two specimens of this animal, both of which were before me, while making out the foregoing description. The color of one is a little darker than the other, but they scarcely differ in any other respects. They were both caught in Burlington, one in 1830, in the cellar of the Rev. G. G. Ingersoll, and the other in 1840, on the surface of the ground in a door-yard. Their fore feet are so closely attached to their bodies, that they serve but little purpose except for digging, and their progress upon the surface of the ground, is extremely slow, labored and awkward. Like the shrew moles, they probably reside most of the time in the ground and venture abroad only in the night. On account of their clumsiness they are frequently drowned in cisterns and tubs of water and are sometimes brought in by cats; but cats are not fond of eating them on account of the musky odor which they have in common with the shrew and shrew moles. It proceeds, as in the other

cases, from a white viscous fluid contained in a sack near the vent.

GENUS *URSUS*.—LINNÆUS.

Generic Characters.—Teeth, 32 to 44.—Incisors $\frac{1}{2}$, canines $\frac{1}{2}$, grinders $\frac{1}{2}$ to $\frac{1}{2}$. Three of the grinders on each side in each jaw, are large, with square tuberculous crowns; the others are small, most of which appear late and are shed early. Body thick, covered with strong hair; ears long and slightly pointed; toes, five, furnished with strong, curved claws, calculated for climbing or burrowing; tail, short.



THE BLACK BEAR.

Ursus americanus.—FALLAX.

DESCRIPTION.—Color shining black; hair long and not curled; nose fawn colored, projecting, brightest about the angle of the mouth, and terminated by a naked black snout; forehead slightly arched; ears oval, rounded at the tip and far apart; palms and soles of the feet short in comparison with the brown bear; claws black and strong with the hairs of the feet projecting over them; tail short.

HISTORY.—The specimen from which our description is drawn was killed in Williston in 1838, and presented to the College of Natural History of the University of Vermont. It measures 6 feet from the nose to the tail; tail 2 inches; height of the ears 4 inches; height to the top of the shoulders 3 feet; rump 2 feet 4 inches. This Bear, which is found throughout all the woody parts of North America, was formerly very common in Vermont, and continues so plentiful at the present day, that our Legislature continue in force a law allowing a bounty of \$5 each, for its destruction. It appears from our Treasurer's reports for several years past that the number of bears for which the bounty has been paid has varied from 40 to 50 annually. The black bear, under ordinary circumstances, is neither very carnivorous nor very ferocious. Its favorite food consists of vegetables, such as Indian corn, nuts, berries and roots. But when these fail, it is compelled by necessity rather than choice to resort to animal food. In such cases, impelled by hunger, it will sometimes attack and destroy young cattle, sheep and hogs, but

THE RACCOON.

THE WOLVERINE.

will seldom, if ever, attack a person except in defence of its cubs, or when provoked, or wounded. The early settlers of this State suffered most from them in consequence of their ravages upon their fields of Indian corn. They entered the fields in the night when the corn was in the milk and broke down and devoured the ears with great greediness; and it was a common business for the settlers to watch for them with guns and shoot them while committing their depredations; and in this way large numbers were annually killed. During the fall, when their food is abundant, bears usually become very fat, and, as the winter sets in, they retire to some natural den among the rocks, or uprooted trees, or into some hollow tree, where they remain in a torpid state and without food until the return of warm weather in the spring. The female produces her young during her hibernation and has from one to five at a litter, but the most common number is two. Their period of gestation is about 15 or 16 weeks, and during this time the females conceal themselves so effectually that we have no record of any being killed while pregnant though they are often discovered while the cubs are very small. When the bears first leave their winter quarters, they are said to be about as fat as when they retired in the fall, but with exercise they shortly lose their fat so as to appear in a few days much emaciated. When the bear is in high order he is valued for his flesh, his grease, and his skin. He is, with the exception of the moose, the largest native quadruped found in Vermont, and has been frequently killed weighing from 400 to 500 pounds. Their skins are worth from \$2, to \$4, or \$5 according to their size and quality.

GENUS *PROCYON*.—*Sterry*.

Genetic Characters.—Teeth 42.—Incisors $\frac{1}{2}$, canines $\frac{1}{2}$, grinders $\frac{3}{4}$. The three first grinders on each side in each jaw, are pointed, the others are tuberculated. Body low set; nose pointed; external ears small, oval; tail long and pointed; feet five toed; nails sharp; mamma six.



THE RACCOON.

Procyon lotor.—*Cuvier*.

Description.—General color blackish gray which results from the hairs being

alternately ringed with black and dirty white; belly lighter; tail bushy, like that of the fox, but more tapering, surrounded by alternate rings of dark and yellowish white, about six of each; head roundish with the snout projecting beyond the upper jaw and terminating in a smooth black membrane through which the nostrils open; face whitish in front, with a black patch surrounding the eyes and descending to the lower jaw, and a black line descending from the forehead between the eyes, pupils of the eyes round; the ears oval, rounded at the tip and the edges of a dirty white color; legs short; whiskers strong. Usual length of the head and body 22 inches, tail 9 inches; height 12 inches.

HISTORY.—Raccoons were very plenty in all parts of Vermont, when the country was new, and they exist in the mountains and woody parts in considerable numbers at the present time. In the general aspect of this animal there is some resemblance of the fox, but in its movements it is more like the bear. It also like the bear subsists both upon animal and vegetable food and its destructive propensity is well known. It sleeps during the day in its nest in some hollow tree or among the rocks, and prowls for its prey during the night; and is said to destroy many more animals than it consumes, merely sucking their blood or eating their brains. It sometimes makes great havoc in the farmer's poultry-yard, and being an excellent climber scarcely any roost can be placed beyond his reach. But it probably does most mischief in the fields of Indian corn, of which it is extremely fond, while the corn is soft, or "in the milk." Here it breaks down and destroys much more than it eats. The Raccoon is said to be fond of dipping its food in water before it eats it, and hence, Linnaeus gave it the specific name of *lotor*, which signifies *washer*. The price of the skin is variable, from 17 to 37½ cents. The largest of these animals in Vermont, weigh about 32 pounds, according to Dr. Williams, who says that its flesh is eaten and considered very excellent food.

GENUS *GULO*.—*Cuvier*.

Genetic Characters.—Teeth 36 to 38.—Incisors $\frac{1}{2}$, canines, $\frac{1}{2}$, grinders $\frac{3}{4}$ or $\frac{1}{2}$. The three first grinders in the upper jaw, and four first in the lower are small, succeeded by a large caniniform or cutting tooth, and small tuberculous teeth further back. Body low; head moderately elongated, ears short and round; tail short; feet with five toes armed with creaked nails.

THE WOLVERENE.

THE WOLVERENE.

Gulo luscus.—SABINE.

DESCRIPTION.—Head broad and rounded; jaws like the dog; ears low, rounded and much hidden by the fur. Back arched; tail low and bushy; legs thick and short and the whole aspect of the animal indicates more strength than activity. Color dark brown, passing into almost black on the back in winter with a pale reddish brown band passing from each shoulder along the flanks and meeting on the rump. Fur similar to that of the bear, but not so long nor valuable. The tail is thickly covered with long black hair. Some white marking on the throat and between the fore legs; legs brownish black; claws strong and sharp. Length 2 feet 6 inches; tail (*vertebrae*) 7 inches; tail with the fur 10 inches.

HISTORY.—This animal was occasionally found when the country was new, in all parts of the state, but was never very plentiful. For many years past, however, it has been known only in the most woody and unsettled districts, and in such places it is now extremely rare, none having been met with to my knowledge for several years. According to Dr. Richardson, from whose work the above description is abridged, this animal is quite common in the far countries at the north, and is a great annoyance to the hunters, robbing their traps of game, or of the bait, which they do so dexterously as seldom to be caught themselves.* The Wolverine is represented as being very fierce and carnivorous in its disposition, and many marvellous stories have been told of its cunning and artifice and gormandising propensities, which are totally unfounded. Its food ordinarily consists of mice, moles, hares and other small animals, seldom meddling with larger ones, excepting such as have been previously killed or disabled. It produces once a year from two to four cubs which are covered with a downy fur of a pale cream color. It is found throughout all the northern parts of North America, even as far north as the 75th degree of latitude.

GENUS *MUSTELA*.—LINNÆUS.

Gomaris Characters.—Tooth 34 or 35—Incisors $\frac{1}{2}$, canines $\frac{1}{2}$, grinders $\frac{1}{2}$, or $\frac{3}{4}$. Second inferior incisors on each side slightly receding; canines strong; grinders cutting; the anterior false grinders conical and compressed; true grinders trisolate, the last with a blunt crown. Body long and cylindrical; head small and oval; ears short and round; legs short; toes 5, armed

*Fanna Berruth, L. 41.

with sharp crooked claws, and glands producing a strong, fetid secretion.

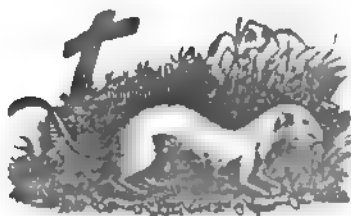


THE WEASEL.

Mustela vulgaris.—LINNÆUS.*Futorius vulgaris*.—Cuvier.

DESCRIPTION.—Color above, in summer dull yellowish brown deepening into hair brown on the upper part of the head and nose, and yellowish white beneath, the brown extending in a rounded spot into the white behind the angle of the mouth; tail next the body the same color as the back, but darker as it approaches the extremity, where it is quite black, and the hairs terminate in a point resembling that of a camel's hair pencil. Color in winter wholly white, excepting the posterior half of the tail, which is always black, or reddish brown. Forehead flatish; ears slightly pointed; eyes small, black and lively; body long and cylindrical; tail short, less than half the length of the body. Length of the head and body of the specimen before me 8 inches; tail (*vertebrae*) 2 inches.

HISTORY.—The Weasel, though nowhere greatly multiplied, is frequently met with in all parts of Vermont. It is generally seen in stone walls, old fences and heaps of bushes. When in sight it seems to be always in motion and its motions are very quick. When in a stone wall or heap of bushes he will sometimes show himself for an instant in half a dozen places in the course of half that number of minutes. The weasel feeds upon mice, young rats, young birds and birds eggs, and sometimes commits depredations upon the eggs and young of our domestic fowls. It is not uncommon for it to enter the barns and granaries and cellars of the farmers in quest of food, and particularly in pursuit of mice, of which it destroys large numbers, and on which account it might be regarded as a public benefactor, were it not for its occasional depredations upon the poultry yard. The female produces her young several times in the course of the year and has from three to five at a litter. But notwithstanding their apparent fecundity, they never become very numerous.



THE ERMINE.

Mustela erminea.—LINN. GZEL.*Futorius ermineus*.—Cuvier.

DESCRIPTION.—Color, both in summer and winter, nearly the same as that of the Weasel, excepting that the upper parts of the Ermine are darker in summer and the under parts a clearer white than the same parts of the Weasel. The Ermine also grows to a larger size than the Weasel and is likewise more thick set, its forehead and nose more convex; its ears broader and more rounded, and its tail about twice as long in proportion to the length of the body. Length of the head and body of the specimen before me 8 inches; tail (vertebræ) 3.5. The tuft or pencil at the extremity extends about .7 inches beyond the vertebræ both in this and the Weasel.

HISTORY.—It has been a matter of dispute whether this and the preceding animal do or do not belong to the same species. Dr. Hartan describes them as two,* Dr. Godman, as one† With these authorities before him, Dr Richardson says that both these species are, indubitably, inhabitants of the American continent, the Ermine extending to the most remote arctic districts and the Weasel as far north, at least, as the Saskatchewan river.‡ Dr. Williams also describes the two as distinct species, and says that the Ermine, which he calls "one of the greatest beauties of nature" sometimes weighs 14 ounces, but that the Weasel is smaller.§ The skin of the Ermine, in its winter pelage of pure white, was formerly held in very high estimation, and was much worn by the nobility and high functionaries of Europe upon their robes and dresses, and particularly by judges. Thence it became the emblem of judicial purity, and the judge who was any way corrupted was said to have soiled his *Ermine*. The value of the skins at present is hardly sufficient to pay for collecting them. The Ermine in its summer dress is, in many places, called the Stoat.



THE MINK.

Mustela vison.—LINN. GZEL.*Futorius vison*.—Cuvier.

DESCRIPTION.—The head is depressed and small; eyes small and far forward; ears low and rounded; neck and body long and slender; tail round and thick next the body and tapering towards the tip; legs short; toes connected by short hairy webs; claws nearly straight, sharp, white and concealed by the fur. The fur is of two sorts, a very dense down mixed with strong hairs; shortest on the head and increasing in length backwards; color of the down brownish gray; that of the hairs varying in different parts from chocolate brown to brownish black; occasional white spots about the throat; two oval glands which secrete a very fetid fluid. Length of the head and body 20 inches, tail 9 inches.

HISTORY.—The Mink is a common animal in Vermont. Its favorite haunts are along the banks of streams, where it dwells in holes near the water, or in the ruins of old walls, or in heaps of flood wood, or in piers and abutments of bridges. It does not venture far from the streams and when pursued betakes himself immediately to the water. It does not run well on land, but swims and dives admirably, and can remain a long time under water. When irritated it ejects a fluid, which diffuses a very unpleasant odor. Its fine short fur, Otter-like tail, short legs and webbed feet, all denote its aquatic habits. Its fur though not highly prized, is more valuable than that of the Muskrat. The food of the Mink consists of frogs, fishes, muscles and fish spawn; and also rats, mice, young birds and other small land animals. They sometimes enter the poultry yard, where they make great havoc among the fowls, by cutting off their heads and sucking their blood. It is not a very timid animal when in the water, but dives instantly at the flash of a gun, which makes it difficult to shoot them. It is easily tamed and in that state is very fond of being caressed, but, like the cat, is easily offended, and, on a sudden provocation, will sometimes bite its kindest benefactor. This animal is found throughout the United States and British America, but there has been some confusion

* Fauna Americana p. 61. † Nat. Hist. i. p. 100.
‡ Fauna Boréal, l. p. 66. § Hist. Vi. l. p. 111.

FISHER MARTIN.

FINE MARTIN.

with regard to its name. The Mink produces from three to six at a litter. When fully grown their weight is about four pounds. Mink skins are worth from 20 to 40 cents, according to quality.



THE FISHER MARTIN.

Mustela canadensis.—LINNÆUS.

DESCRIPTION.—Head, neck, shoulders and top of the back, mixed with gray and brown; nose, rump, tail and extremities, brownish black; sometimes a white spot under the throat, and also between the fore and hind legs; lower part of the fore legs, the fore feet and the whole of the hind legs, black; tail full, black, lustrous and tapering to a point; fur on the head short, but gradually increasing in length towards the tail; the head has a strong, roundish, compact appearance; the ears are low semicircular and far apart, leaving a broad and slightly rounded forehead; fore legs short and strong; toes on all the feet connected at the base by a short web which is covered on both sides with hair. Length from the nose to the insertion of the tail, 23 inches; tail, including the fur, 16 inches.

HISTORY.—This animal is known in different places under a great variety of appellations, but in Vermont it is usually called the Fisher, or Fisher Martin. This name is, however, badly chosen, as it is calculated to deceive those unacquainted with the animal, with regard to its nature and habits. From its name the inexperienced would conclude that it led an aquatic mode of life, and that like the otter, it subsisted principally upon fishes. But this is by means true; and they, who have had an opportunity to observe its habits, aver that it manifests as much repugnance to water as the domestic cat. It may, perhaps, sometimes devour fishes, which are thrown upon the shore, but it usually subsists by preying upon small quadrupeds, birds, eggs, frogs, &c. like the martin and other kindred species. It is said to kill the porcupine, by biting it on the belly, and then devour it. It lives in woods, preferring those which are low and damp. This animal is much valued for its fur, and considerable numbers are taken in the state, annually. The price of the skin varies from \$1 to \$2. It is

sometimes called the Pohen, or the Pohan Wessel, or the Fisher Wessel.



THE FINE MARTIN.

Mustela martes.—LINNÆUS.

DESCRIPTION.—General color, fulvous brown, varying in different individuals, and at different seasons, from bright fulvous, to brownish black; bright yellow under the throat; hair of the tail longer, coarser and darker than that of the body; the color on all parts darker and more lustrous, and the fur more valuable in winter than in summer; nose and legs, at all seasons, dark, and the tip of the ears light. The fur of this animal is of two kinds, one coarse and the other fine and downy. The usual length of the head and body, 18 inches; tail, 9.

HISTORY.—In Vermont the name of Martin and Sable are indifferently applied to this animal, but the latter incorrectly, as the true sable is not found in this country. In works on natural history it is usually denominated the Pine Martin. This animal was formerly very plentiful in most parts of the state, but it is at present chiefly confined to the mountainous and woody portions. Though small it is much hunted for its fine and valuable fur, which, with the clearing and settling of the country, has very much reduced their numbers. Many are, however, still taken on the forest-clad mountains along the central part of the state. They are usually caught in traps baited with some kind of fresh meat. Their food consists of mice, hares, partridges, and other birds. They often rob birds nests of their eggs, or young, and will ascend trees for that purpose, or to escape pursuit. When its retreat is cut off, it will turn upon its assailant, arch its back, erect its hair and hum and snarl like a cat. It will sometimes seize a dog by the nose and bite so hard, that, unless the latter is accustomed to the combat, it suffers the little animal to escape. It is sometimes tamed and will manifest considerable attachment to its master, but never becomes docile. Martins burrow in the ground. The female is smaller than the male. Her time of gestation is said to be only six weeks, and she brings forth from four to seven at a litter, about the last of April. A full

THE SKUNK.

THE AMERICAN OTTER.

grown martin weighs about four pounds. The price of prime skins is from \$1, to \$1.35.

GENUS *MEPHITIS*.—Cuvier.

Generic Characters.—Teeth 34—incisors, $\frac{3}{1}$, canines $\frac{1}{1}$, graders $\frac{3}{3}$; canines strong and conical; superior tuberculous teeth very large and as broad as they are long; the inferior graders with two tubercles on the inside. Head short; nose projecting; feet five toed, hairs on the bottom, and furnished with nails suitable for digging; trunk of the tail of moderate length, or very short; hair of the body long, that of the tail very long; and glands, which secrete an excessively fetid liquor.



THE SKUNK.

Mephitis americana.—DRAK.

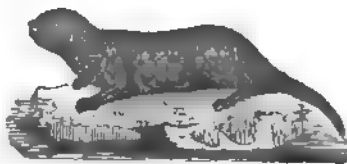
DESCRIPTION.—General color black, with a white spot between the ears, which often extends along the sides towards the hips in the form of the letter V, and a narrow strip of white in the face; tail bushy, tipped with white; nails of the fore feet strong and about the length of the palm; hair on the head short, longer on the body and very long on the tail. Length from the nose to the insertion of the tail 16 inches, head $4\frac{1}{2}$ inches, body $11\frac{1}{2}$ inches, tail (trunk 10, tuft 4) 14 inches.

HISTORY.—The skunk is a very common animal in Vermont. It is not confined to the forests, nor to the thinly settled parts of the country, but frequently makes its residence in the midst of our villages. During the day he shelters himself in stone walls, or beneath barns, or out buildings, and prowls for his food during the night. This consists of eggs, young birds, mice and other small quadrupeds and reptiles. He frequently does considerable mischief in our poultry yards, by the destruction of eggs and fowls. What renders this animal most remarkable is its peculiar weapon of defence. When pursued, or attacked, it has the power of ejecting in the face of its enemy a fluid of the most nauseating and stifling scent, which exists in nature. This fluid is secreted by glands situated near the root of the tail, and seems to be designed wholly as a means of defence, being totally independent of the ordinary evacuations. When undisturbed the skunk has

no disagreeable odor, and whole nests of them may lie under a barn floor for months, without betraying their presence by their scent. The flesh of the skunk when the odorous parts have been removed is well flavored and wholesome food.

GENUS *LUTRA*.—Briss.

Generic Characters.—Teeth 36—Incisors, $\frac{3}{1}$, canines $\frac{1}{1}$, graders $\frac{3}{3}$; canines of moderate length and hooked; the first superior grinder small and blunt, the second and third cutting, the fourth with a strong spur on the inner side, the fifth with three external points and a broad internal spur: the inferior vary from five to six but resemble the superior. Head large and flattened; ears short and round; body very long, and low upon the legs; tail long, flattened horizontally and tapering; feet webbed; nails crooked and sharp; body covered with a fine fur mixed with long bristly hairs; two small oral glands secreting a fetid liquor.



THE AMERICAN OTTER.

Lutra brasiliensis.—DRAK.

DESCRIPTION.—Color dark reddish glossy brown; pale or whitish about the throat and face; head globular; neck long; body long and cylindrical; tail depressed at the base; feet webbed, short and strong; 5 toes on the anterior feet, and 4 with the rudiment of a 5th on the posterior. Total length of one of the largest size, 4 feet; length of the head $4\frac{1}{2}$ inches, tail 17 inches, height 10 inches, circumference at the middle of the back 19 inches.

HISTORY.—The Otter lives in holes in the banks of creeks and rivers, and feeds principally upon fish, frogs and other small animals. They were formerly very common in this state, particularly along the streams which fall into lake Champlain and lake Memphremagog. Otter Creek derives its name from the great abundance of otter, which formerly inhabited its banks. They are now become scarce, but are occasionally taken at several places within the state.

The Otter is an active, strong and voracious animal. When attacked and unable to escape they fight with great fierceness, and when fully grown are more than a match for a common-sized dog. The teeth of the Otter are sharp and strong

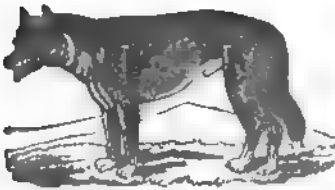
THE COMMON WOLF.

THE COMMON WOLF.

and his bite very severe. His legs are very short and his feet webbed, on which account he seems to be better fitted for swimming than for running upon land; and he is so eminently aquatic in his habits that he is seldom seen at much distance from the water. This animal when fully grown measured according to Dr. Williams, 5 or six feet in length and weighed about 30 pounds, but the total length of those taken at present seldom exceeds 4 feet. The price of the skin is at present from 5 to 7 dollars, but it has been at times in such demand as to be worth 10 or 12 dollars.

GENUS *Canis*.—*Linnaeus*.

Generic Characters.—Teeth 42—Incisors, $\frac{1}{2}$, canines $\frac{1}{2}$, grinders $\frac{1}{2}$. The three first grinders in the upper jaw are small and edged, and are termed false molars, or grinders; the great carnivorous tooth above bicusped, with a small tubercle on the inner side, and two tuberculous teeth behind each of the carnivorous ones. Muzzle elongated, naked and rounded at the extremity, tongue smooth, ears pointed and erect in the wild species; fore feet with 5 toes and hind feet with 4, having robust nails.



THE COMMON WOLF.

Canis lupus.—*Linnaeus*.

DESCRIPTION.—General color yellowish or reddish gray, blackish on the shoulders and rump, and yellowish white beneath, but varying much according to age and climate, being in some cases nearly black and in others almost white.* On the back and sides there is usually an intermixture of long black, and white hairs with a grayish wool, which partially appears, giving to those parts a grayish hue, which deepens along the back into black; hair on the back part of the cheeks, bushy; tail straight and bushy like that of the fox and nearly the color of the back; eyes oblique; ears erect; teeth very strong.

*Difference of colour has been the occasion of the division of this species into the following varieties:

- | | | |
|------------|---------------------------|------------------|
| Variety 1. | <i>Lupus griseus</i> , | Common Gray Wolf |
| " | 2. <i>Lupus albus</i> , | White Wolf. |
| " | 3. <i>Lupus tinctus</i> , | Faint Wolf. |
| " | 4. <i>Lupus nubilus</i> , | Dusky Wolf. |
| " | 5. <i>Lupus ater</i> , | Black Wolf. |

Length of the specimen in the collections of the College of Natural History of the Vermont University, from the nose to the tail 4 feet 3 inches, tail 17 inches; height at the shoulder 2 feet.*

HISTORY.—For some years after the settlement of this state was commenced, wolves were so numerous and made such havoc of the flocks of sheep, that the keeping of sheep was a very precarious business. At some seasons particularly in the winter they would prowl through the settlements by night in large companies, destroying whole flocks in their way, and, after merely drinking their blood and perhaps eating a small portion of the choicest and tenderest parts, would leave the carcasses scattered about the enclosure and go in quest of new victims. Slaughter and destruction seemed their chief delight; and while marauding the country they kept up such horrid and prolonged howlings as were calculated, not only to thrill terror through their numerous victims, but to appall the hearts of the inhabitants of the neighborhood. Though the sheep seems to be their favorite victim, wolves sometimes destroy calves, dogs, and other domestic animals; and in the forest they prey upon deer, foxes, hares and such other animals as they can take. Impelled by hunger they have been known in this state to attack persons,* but they usually flee from the presence of man. The wolf bears a strong resemblance to our domestic dog; is equally prolific, and its time of gestation is said to be the same. It produces its young in the early part of summer, having from four to eight at a birth. Between the dog and the wolf prolific hybrids have often been produced, which however partake more of the nature of the wolf than of the dog.

Wolves have always been so great an annoyance that much pains have been taken for their extermination, but at present, their number is so much reduced that comparatively very little damage is done by them in this state. The legislature, however, continues in force a law, giving a bounty of \$20 for the destruction of each grown wolf within the state, and \$10 for each sucking whelp of a wolf; and the amount paid annually for wolf certificates is usually from one to two hundred dollars. The largest wolves killed in Vermont have weighed from 90 to 100 pounds. The only part of the wolf which is valuable is its skin, which affords a warm and durable fur

* This specimen is distorted by too much stuffing. It was killed in Addison county about ten years ago.

*Williams Hist. I. 101.

THE RED FOX.

THE CROSS FOX.



THE RED FOX.

Canis fulvus.—DESMARSET.

DESCRIPTION.—General color yellowish red, or straw yellow, less brilliant towards the tail; chin white; breast dark gray; belly whitish, tinged with red towards the tail; fronts of the legs and feet black; tail very bushy and less ferruginous than the body, the hairs being mostly terminated with black, giving it a dark appearance, with usually a few white hairs at the tip; eyes near to each other;—length of the head and body 28 inches; tail including the hair 16 inches; height of the shoulder 13 inches.

HISTORY.—The Fox has always been proverbial for slyness and cunning, and to illustrate these traits of character in the human species this animal has been largely taxed by fabulists, particularly by *Æsop*, who composed his fables 2400 years ago. Foxes have their residence chiefly in holes, which they dig in the earth, or of which they get possession by ejecting the woodchuck from his. These burrows have two or more entrances and usually extend under ledges of rocks or roots of trees so that digging out the animal is often attended with considerable labor. Though sometimes seen skulking about in the day time, or basking in the sun, the Fox does not usually venture much abroad excepting in the night. He then prowls for his prey through the woods and fields and even among our out-buildings. His food consists of bares, rats, mice, small birds and poultry. He is said sometimes to feed upon frogs, snails and insects, and is fond of several kinds of berries and fruits. The fable of the fox and sour grapes, shows that the partiality of this animal for the fruit of the vine was understood in the days of *Æsop*. The Fox is a great annoyance in many parts of the state, sometimes destroying young lambs and often making great havoc among the poultry. A bounty of 25 cents each has been for several years paid for killing Foxes within the state; and the amount paid out of the treasury on this account has varied from \$1000 to \$2000 annually, showing that from 4000 to 8000 foxes have been annually destroy-

ed. The law authorizing the bounty was repealed in 1841.

The red Fox is the common fox in Vermont, as well as in all the northern parts of the United States and Canada. Much doubt has existed with regard to the identity of this fox with the common fox of Europe, *Canis vulpes*, but it is at present regarded by the best naturalists as a distinct species. The particulars in which the two species differ are pointed out by Dr. Richardson in his *Fauna Boreali Americana*, Vol. I. p. 91. This fox is sometimes taken in traps, but he is so sly and suspicious that to trap for him successfully requires much skill. The best fox hunters attribute their success to the use of *asafetida* or *castoreum*, with which they rub their traps, believing the foxes to be attracted by such perfumes. The fox is however more commonly taken in Vermont, by being shot under the pursuit of the hound. When the hound is put upon their track they do not retreat directly to their holes, nor lead off to any considerable distance in one direction, but take a circuit around the base of some hill which they will often encompass many times before they proceed to their burrows. The hunter, knowing this to be the habit of the fox, can judge of the course he will take and is enabled to place himself in a situation to shoot the animal as it passes. The skins of red foxes, if prime, are always valuable and the price for several years past has been from \$1 to \$1.25 and sometimes a little higher according to quality. The fox is a prolific animal. It produces its young usually in April and has from three to six at a litter.

THE AMERICAN CROSS FOX.

Canis fulvus.—Var. *decussatus*.

DESCRIPTION.—A blackish stripe passing from the neck down the back and another crossing it at right angles over the shoulders; sides ferruginous, running into gray on the back, the chin, legs and under parts of the body black, with a few hairs tipped with white; upper side of the tail gray; under side and parts of the body adjacent, pale yellow; tail tipped with white. The cross upon the shoulders is not always apparent even in specimens, which, from the fineness of the fur, are acknowledged to be Cross Foxes. Size the same as the common Fox.

HISTORY.—Instead of considering the Cross Fox a distinct species, as most American writers have done, I have concluded to adopt the opinion of Dr. Richardson, who regards it merely as a variety of the common fox. In form and size

THE BLACK, OR SILVER FOX.

the Cross Fox agrees very nearly with the red fox, and differs from it chiefly in color, and perhaps a little in the fineness of its fur. The skin of the Cross Fox bears a much higher price than the red fox, which is owing almost entirely to the color. The price of a prime skin of this fox in Vermont is from \$1,50 to \$2,50.

THE BLACK, OR SILVER FOX.

Canis fulvus.—Var. *argentatus*.

DESCRIPTION.—Color sometimes entirely black and shining, with the exception of the tip of the tail, which is white; but more commonly hoary on some parts from an intermixture of hairs tipped with white; the nose, legs, sides of the neck, black, or nearly so; fur long and thick upon the body and tail, and short on the paws and face; soles of the feet covered with woolly fur. One of the largest of this variety measured from the nose to the insertion of the tail 31 inches, and the tail, including the hair, 18 inches.

HISTORY.—The Black or Silver Fox is regarded by Dr. Richardson as another variety of the common fox. It is much less common than the preceding variety and usually grows to a larger size. It has sometimes been taken in Vermont, but very seldom. Its fur is exceedingly valuable, prime skins being worth from \$10 to \$15 each.

There is another variety in Vermont, which is not uncommon, called the *Sampson Fox*. The fur is coarse resembling wool and of little value. The Gray Fox, *Canis virginianus*, is said to have been taken in this state, but as I have seen no Vermont specimen, it is here omitted. As we have before said, it is disputed whether our common red fox is, or is not identical with the common fox of Europe. Harlan, Godman, Richardson, and others, describe it as a distinct species. But Dr. McMurtrie, the translator of Cuvier's Animal Kingdom, says that the *Canis fulvus*, or American red fox, is identical with the European, and was introduced into the United States many years ago by some Englishmen, who thought they afforded better sport than the American species.*

GENUS FELIS.—Linnaeus.

Generic Characters.—Teeth 30—Incisors $\frac{3}{2}$, canines $\frac{1}{1}$, grinders $\frac{4}{2}$. Inferior incisors forming a regular series; canines very strong; grinders, above, two conical ones on each side, one carnivorous one with three lobes and a small tuberculous one, below, two false compressed simple grinders and one carnivorous bicusped. Head round, jaws short, tongue aculeated; ears

THE LYNX.

in general short and triangular; pupils of the eyes in some circular and in others vertically oval; fore feet with 5 toes, hind feet with 4, all furnished with long sharp retractile claws.



THE LYNX.

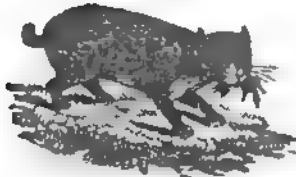
Felis canadensis.—LINNÆUS.

DESCRIPTION.—General aspect hoary, sometimes mottled; lighter and yellowish beneath, the extremity of the hairs being white, and below, yellowish brown; head rounded; ears erect, terminated with black pencils or tufts, $1\frac{1}{2}$ inch long, black at the tip, with a black border on the posterior side. Anterior border yellowish. Base of the jaws surrounded by a fringe of long hair, intermixed with gray black and white; brownish around the mouth, white beneath; whiskers black and white; tail terminated with black; legs yellowish; toes 4 on each foot, much spread; nails sharp, white and concealed in long silky fur or hair. Total length 3 feet 4 inches; tail 5 inches. Height of the back 1 foot 4 inches; height of the ear $1\frac{1}{4}$ inches.

HISTORY.—The Lynx was never very greatly multiplied in Vermont, but when the country was new, it was frequently met with, and individuals have been taken occasionally, down to the present time. It resembles in fierceness and subtlety the other animals of the cat kind, preying upon hares, rabbits, mice and other small animals. Nor does it confine itself to small game, but sometimes destroys larger animals, such as deer, sheep, calves &c. This it is said to do by dropping upon them from branches of trees, clinging upon their necks with their sharp claws and opening their jugular veins and drinking their blood. Sheep and lambs have sometimes been destroyed by them in this state. This animal is found in large numbers in the vicinity of Hudson's Bay. Their skins are valuable and the Hudson Bay Company procure annually from seven to nine thousand of them. The flesh of the Lynx is used for food and is said to resemble that of the hare. It is a timid animal and makes but little defence when attacked. Its gait is by bounds but not swift. It swims well and will cross lakes 2 miles wide. It breeds once a year and has two young at a time.

* Cuvier's Animal Kingdom, Vol. 1, p. 433.

THE BAY LYNX.

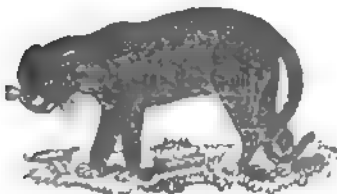


THE BAY LYNX.

Felis rufa.—GUILDENSTED.

DESCRIPTION.—Color yellowish, or reddish brown. Inferior parts of the throat white, or whitish. Eyes encircled with a whitish band. Front and portions about the upper lip striped with darkish; irides yellow. Ears short, tufted with black hair springing from the back of the ear, near the tip. Inside of the legs spotted with brown. Tail short, terminated with dark brown, and obscurely banded.—Fringe of hair longer than in other parts near the base of the jaw. Ears surrounded posteriorly with a black border, within which is a triangular patch of yellowish white. Length of the head and body, 2 ft. 3 inches; tail, 4 inches; height, 16 inches.

HISTORY.—This animal has been frequently met with in our woods, and has perhaps been most generally known by the name of *Wild Cat*. It is, however, to be distinguished from the smaller wild cats with long tails, which are met with, and which have probably sprung from the domestic cat. In its habits it resembles the preceding species, preying upon squirrels, birds, and other small animals. This animal is now very rare, being only occasionally seen, in the most unsettled parts of the State.



THE CATAMOUNT.

Felis concolor.—LINNÆUS.

DESCRIPTION.—General color, brownish red on the back, reddish gray on the sides, and whitish or light ash on the belly; tail, the same color as the back, excepting the extremity, which is brownish black, not tufted; chin, upper lip, and inside of the ears, yellowish white; the hairs on the back are short, thick, brownish, and tipped with red; on the

sides and belly, longer, looser, lighter, and tipped with white; hairs of the face like the back, with whitish hairs intermingled, giving it a reddish gray tinge; body long, head round, jaws strong; teeth strong; canines conical; claws strong, retractile, and of a pearly white color. Dimensions of the specimen from which the above description is drawn—length from the nose to the tail, 4 ft. 6 inches; tail, 2 ft. 6 inches; from the top of the head to the point of the nose, 10 inches; width across the forehead, 8 inches; length of the fore legs, 1 ft. 2 inches; the hind legs, 1 ft. 4 inches.

HISTORY.—This ferocious American animal has been known in different places under a great variety of different names. In the southern and western parts of the United States it is called the *Cougar*, *Painter*, or *American Lion*; in New England it is known by the name of *Catamount*, or *Panther*; while in Europe it has more commonly borne the name of *Puma*. This is the largest and most formidable animal of the cat kind found in America. In form it bears considerable resemblance to the domestic cat, but when fully grown is about two-thirds the size of a lion. It, however, differs from the lion in not having the tail tufted, and the male being without a mane. These animals, though scattered over all the temperate and warmer parts of the continent, do not appear to have been any where very numerous. They were formerly much more common in Vermont than at the present day, and have at times done much injury by destroying sheep and young cattle. They usually take their prey, like the common cat, by creeping softly within proper distance, and then leaping upon it and seizing it by the throat. If the victim be a large animal, like a calf, sheep, or deer, they swing it upon their back, and dash off with great ease and celerity, into some retired place, where it is devoured at leisure. Some years ago one of these animals took a large calf out of a pen in Bennington, where the fence was four feet high, and carried it off on his back. With this load, he ascended a ledge of rocks, where one of the leaps was 15 feet in height.* During the day the Catamount usually lies concealed, but in the night prowls for his prey, and in early times his peculiar cry has often sent a thrill of horror through a whole neighborhood. When the country was new, much precaution was considered necessary, when travelling in the woods in this state, in order to be secure from the attacks of this ferocious beast.

* *Williams History*, Vol. 1, p. 164.

THE COMMON SEAL.

Travellers usually went well armed, and at night built a large fire, which served to keep this cautious animal at a distance. Under such circumstances a catamount will sometimes approach within a few rods of the fire, and they have been thus shot in this state by aiming between the glaring eye-balls, when nothing else was visible. The Catamount will seldom attack a person in the day time, unless provoked or wounded. In the New York Museum is the skin of one of these animals, of which the following account is given in Dr. Godman's Natural History. "Two hunters, accompanied by two dogs, went out in quest of game, near the Catskill mountains. At the foot of a large hill, they agreed to go round it in opposite directions, and when either discharged his rifle, the other was to hasten towards him to aid him in securing the game. Soon after parting, the report of a rifle was heard by one of them, who, hastening towards the spot, after some search, found nothing but the dog, dreadfully lacerated and dead. He now became much alarmed for the fate of his companion, and, while anxiously looking round, was horror struck by the harsh growl of a catamount, which he perceived on a large limb of a tree, crouching upon the body of his friend, and apparently meditating an attack on himself. Instantly he levelled his rifle at the beast, and was so fortunate as to wound it mortally, when it fell to the ground along with the body of his slaughtered companion. His dog then rushed upon the wounded catamount, which, with one blow of his paw, laid the poor creature dead by its side. The surviving hunter now left the spot, and quickly returned with several other persons, when they found the lifeless catamount extended near the dead bodies of the hunter and the faithful dogs." So recently as 1830, one of these animals sprang upon an unfortunate woman, as she was passing along a road in Pennsylvania, and killed her instantly.

The weight of a full grown catamount is usually about 100 pounds. One of the largest taken in this State, to my knowledge, was killed in Roxbury, in December, 1841. It measured 7 feet from the nose to the extremity of the tail, and weighed 116 pounds. Under the name of panther, our legislature give a bounty of \$30 each for the destruction of this animal within the state.

THE COMMON SEAL.

Phoca vitulina.—LINNÆUS.

But what! exclaims one, the Seal in Vermont—that inland mountain state?

• Vol. I, p. 391. | Grt. Part V, p. 408.

THE BEAVER.

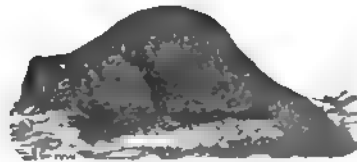
Be not surprised, kind reader. It is even so, and there are living witnesses of the fact. While several persons were skating upon the ice on lake Champlain, a little south of Burlington, in February, 1810, they discovered a living seal in a wild state, which had found its way through a crack and was crawling upon the ice. They took off their skates, with which they attacked and killed it, and then drew it to the shore. It is said to have been 4½ feet long. It must have reached our lake by way of the St. Lawrence and Richelieu; but it was not ascertained whether the poor (fat) wanderer had lost his way, or having taken a misgiving at society, was seeking voluntary retirement from the world—of seals.

ORDER RODENTIA.—Caviar.

This is the same as the order Glires of Linnæus, and embraces those animals, whose teeth are fitted for gnawing. They have two large incisors in each jaw, separated from the grinders by a vacant space. No canine teeth. The grinders in some of the genera have flat or ridged crowns, and in others blunt tubercles. Under jaw articulated by a longitudinal condyle; stomach simple; intestines long; cæcum large; mammae variable in number. They feed generally on vegetables, but the species with tuberculated grinders are nearly omnivorous.

GENUS CASTOR.—LINNÆUS.

Generic Characters.—Teeth, 20—incisors 4, no canines, grinders, 4-4. Incisors, very strong, smooth on the outside, and angular within; grinders have a fold on the internal edge, and three similar folds on the outer edge of the upper teeth, which are inverted in the lower ones. Eyes, small; ears, short and round; feet, five toed; fore feet short; hind feet longer and palmated; tail, large, flat, and scaly; a pouch near the root of the tail in the male filled with an emollient, odoriferous secretion.



THE BEAVER.

Castor fiber.—LINNÆUS.

Description.—Fur dense, consisting of two sorts, one coarse, long, and of a chestnut, or reddish brown color, the oth-

THE BEAVER.

THE BEAVER.

er shorter, very fine and of smoky or silvery gray; head flattened; nose short and thick; eyes small; ears short, thick, rounded and covered with short fur; neck short; body thick; back arched; tail flat and broad horizontally, oval and covered with oval angular scales; fore legs very short and small; and the fore feet are used as hands for conveying food to the mouth; hind feet with long, hard and callous soles, and long toes connected by a web. The usual length of the beaver from the nose to the origin of the tail, is from 30 to 40 inches, and the tail about 11 inches long and 6 broad at the widest part. The usual weight of a full grown Beaver is stated by Dr. Richardson to be about twenty-four pounds.

HISTORY.—The beaver, though formerly a very common animal in Vermont, is probably now nearly or quite exterminated, none of them having been killed within the state, to my knowledge, for several years. The last, of which I have any account, was killed, in Essex county, 12 years ago.* The vestiges of its labors are, however, still found in "the beaver meadows" in all parts of the country. The peculiarities in the form of the beaver, and especially the remarkable instinct, which guides him in the construction of his dwelling, have always rendered him an object of admiration, and many accounts of him have been published, most of which abounded in exaggeration and fable. The following account by Hearne, who studied the habits of this animal for 20 years, in the fur countries around Hudson's Bay, is pronounced by Dr. Richardson,† who, himself, had the best opportunity for ascertaining its truth, to be the most correct and free from exaggeration, which has ever been published.

"Where beavers are numerous, they construct their habitations upon the banks of lakes, ponds, rivers, and small streams; but when they are at liberty to choose, they always select places where there is sufficient current to facilitate the transportation of wood and other necessities to their dwellings, and where the water is so deep as not to be frozen to the bottom during the winter. The beavers that build their houses in small rivers and creeks, in which water is liable to be drained off, when the back supplies are dried up by the frost, are wonderfully taught by instinct, to provide against that evil, by making a dam quite across the stream, at a convenient distance from

their houses. The beaver dams differ in shape, according to the nature of the place in which they are built. If the water in the stream have but little motion, the dam is almost straight; but when the current is more rapid, it is always made with a considerable curve convex towards the stream. The materials made use of, are drift-wood, green willows, birch and poplars, if they can be got; also mud and stones, intermixed in such a manner, as must evidently contribute to the strength of the dam; but there is no order or method observed in the dams except that of the work being carried on with a regular sweep, and all the parts being made of equal strength. In places which have been long frequented by beavers undisturbed, their dams, by frequent repairing, become a solid bank, capable of resisting a great force both of water and ice; and as the willow, poplar and birch, generally take root and shoot up, they by degrees form a kind of regular planted hedge, which I have seen in some places so tall that birds have built their nests among the branches.

"The beaver-houses are built of the same materials as their dams, and are always proportioned in size to the number of inhabitants, which seldom exceeds four old and six or eight young ones; though, by chance, I have seen above double that number. Instead of order or regulation being observed in rearing their houses, they are of much ruder structure than their dams; for, notwithstanding the sagacity of these animals, it has never been observed that they aim at any other convenience in their houses, than to have a dry place to lie on; and there they usually eat their victuals, which they occasionally take out of the water. It frequently happens that some of the large houses are found to have one or more partitions, if they deserve the appellation; but it is no more than a part of the main building, left by the sagacity of the beaver to support the roof. On such occasions, it is common for those different apartments, as some are pleased to call them, to have no communication with each other but by water; so that, in fact, they may be called double or treble houses, rather than different apartments of the same house. I have seen a beaver-house built in a small island, that had near a dozen different apartments under one roof; and, two or three of these only excepted, none of them had any communication with each other but by water. As there were beavers enough to inhabit each apartment, it is more than probable that each family knew their own, and al-

* Letter of the Hon. J. Parker, of Orleans, to the Author, Sept. 27, 1841.

† *Fauna Boreali Americana*, Part 1. page 108.

THE BEAVER.

THE BEAVER.

ways entered at their own doors, without any further connection with their neighbors than a friendly intercourse, and to join their united labors in erecting their separate habitations, and building their dams where required. Travellers, who assert that beavers have two doors to their houses, one on the landside, and the other next the water, seem to be less acquainted with these animals than others, who assign them an elegant suite of apartments. Such a construction would render their houses of no use, either to protect them from the attacks of their enemies, or guard them against extreme cold weather.

"So far are beavers from driving stakes into the ground, when building their houses, that they lay most of the wood crosswise, and nearly horizontal, and without any other order than that of leaving a hollow, or cavity in the middle; when any unnecessary branches project inward, they cut them off with their teeth, and throw them in among the rest, to prevent the mud from falling through the roof. It is a mistaken notion, that the wood work is first completed and then plastered; for the whole of their houses as well as their dams, are, from the foundation, one mass of mud and wood, mixed with stones, if they can be procured. The mud is always taken from the edge of the bank, or the bottom of the creek or pond, near the door of the house; and, though their fore paws are small, yet it is held so close up between them under their throat, that they carry both mud and stones, while they always drag the wood with their teeth. All their work is executed in the night; and they are so expeditious, that in the course of one night I have known them to have collected as much mud as amounted to some thousands of their little handfuls. It is the great policy in these animals to cover the outside of their houses every fall with fresh mud, and as late as possible in the autumn, even when the frosts become pretty severe, as by this means it soon freezes as hard as a stone, and prevents their common enemy, the wolverene, from disturbing them during the winter. And as they are frequently seen to walk over their work, and sometimes to give a flap with their tail, particularly when plunging into the water, this without doubt, has given rise to the vulgar opinion that they use their tails as a trowel, with which they plaster their houses; whereas that flapping of the tail is no more than a custom, which they always preserve, even when they become tame and domestic, and more particularly so when they are startled."

Judge Parker, who has devoted considerable attention to the habits of our native quadrupeds, after confirming the above statement of Hearne, in relation to the structure of the dams and houses of the beaver, observes: "I have thought the correct judgment exercised by the beaver in the selection of the place for his dam, to be the most remarkable part of his character. The choice seems to be made with reference to the plenty of timber suitable for his food, and the proportion, which the space to be overflowed bears to the length of the dam; and with regard to these, they seem to judge as correctly as man. So far as they have fallen under my own observation, I have always found them at the very best places, which could be selected on the whole stream. One chief object of their pond seems to be, to float timber, which is to serve them for food, to their dwellings; and where the water does not prove deep enough for that purpose, they deepen it by digging a trench along the bottom, and cutting off the logs which lie in their way, with their teeth. I have seen logs 20 inches in diameter, which had been thus cut off and removed."*

Their food during the winter consists principally of the root of the pond lily, *Nuphar luteum*, which they find in the water beneath the ice. They also feed upon the bark of the poplar, birch and willow, which they cut down in the fall and drag into the water opposite the doors of their houses, as a part of their supply for the winter. In the summer they rove about, feeding upon different kinds of herbage and berries, and do not return to repair their houses and lay in their winter stock of wood till towards fall. When they are to erect a new habitation, they fell the timber for it in the spring, but do not begin to build till August, and never complete it till cold weather sets in.

The beaver is a cleanly animal, never allowing any excrement or filth within its lodge. They are said to pair in February and bring forth their young in the latter part of May, producing from four to eight at a litter. Beavers seldom cut down trees which exceed 5 or 6 inches in diameter, and they always leave the top of the stump in the form of a cone. They gnaw all round the tree, but direct its fall by cutting one side higher than the other. The weight of a full grown beaver does not often exceed 30 pounds, though, according to Dr. Williams, they have taken in Vermont weighing from 40 to 60 pounds.†

* Letter to the Author.

† His. of Vermont, Vol. I. p. 121.

THE MUSK-RAT.

THE MEADOW MOUSE.

GENUS FIBER.—Cuvier.

Generic Characters.—Teeth, 16—Incisors $\frac{2}{2}$, no canines, grinders $\frac{3}{3}$. Lower incisors sharp pointed and convex in front; grinders with flat crowns, furnished with scaly, transverse zigzag laminae; four toes, with the rudiments of a fifth, on the fore feet; five toes on the hind feet, having the edges furnished with stiff hairs, used in swimming, like the membrane of palmated feet; tail long, compressed laterally; both sexes secrete an odoriferous, musky unguent.



THE MUSK RAT.

Fiber zibethicus.—Desm.

DESCRIPTION.—General color, yellowish, or reddish brown, lighter beneath; body thick and flattish, with a short head and indistinct neck; incisory teeth very large; lips covered with coarse hair; nose short; eyes small and lateral, and partly concealed by the hair; ears low, oblong, covered with hair and inconspicuous; tail nearly as long as the body, flattened laterally, and covered with small brown scales, interspersed with short black hairs; legs and feet covered with short, brown shining hair; toes 5 on each foot; thumbs very small; claws strong and sharp; a brown spot beneath the tip of the under jaw. Length of the specimen before me, from the nose to the origin of the tail 13 inches; tail $9\frac{1}{2}$ inches; weight $3\frac{1}{2}$ pounds.

HISTORY.—Musk Rats, or Musquashes, as they are often called, have a strong smell of musk, particularly the males. Their fur is used in the manufacture of hats, and great numbers of their skins are shipped to Europe. Dr. Richardson informs us that from four to five hundred thousand are annually imported from North America into Great Britain. Musk Rats were very numerous in Vermont when the country was new, and their skins afforded to the early settlers an important article of export. Although now much diminished, they are still found in considerable numbers, inhabiting the banks of our larger streams.

In its aquatic and nocturnal habits, as well as in its appearance and the mode of constructing its dwelling, the Musk-rat is closely allied to the beaver. Like the beaver he is an excellent swimmer, dives well and remains for a considerable time under water. It is only in low swampy situations that the Musk-rat resorts to the construction of habitations above ground.

These are made principally of mud mixed with grass, and in the form of a dome, with a warm bed of leaves and grass within. The only place of entrance is from beneath, and from this there are usually several subterranean passages leading in different directions. When ice forms over the surface of the swamp, they make breathing holes through it, which they sometimes protect from frost by a covering of mud. When disturbed in their dwellings, the Musk-rats retreat through their subterranean passages. They feed principally upon the roots and bark of aquatic plants, but do not, like the beaver, lay in a store of provisions for the winter.

During the winter several families of Musk-rats usually reside together. But when warm weather approaches, they desert their house, and during the summer live in pairs and rear their young, of which they have from three to six at a litter. They are very watchful and shy, seldom venturing abroad during the day time, and hence they are very seldom seen, even in neighborhoods where they are known to abound. They run badly upon the land, but swim with facility and dive instantly on perceiving the flash of a gun, usually giving a smart blow upon the water, with the tail, in the act of diving. They are usually taken in steel-traps. The skins are of little value, seldom bringing more than 17 cts. and often less than 10 cents.

GENUS ARVICOLA.

Generic Characters.—Teeth 16—Incisors $\frac{2}{2}$, no canines, grinders $\frac{3}{3}$. The grinders are flat on the crowns, and marked with zigzag lines of enamel. Four toes and the rudiments of a fifth on the fore feet; on the hind feet five toes; toes furnished with weak nails, but neither palmated nor furnished with hairs on their borders; ears large; tail round, hairy, and nearly as long as the body.

THE MEADOW MOUSE.

Arvicola riparius.—Ord.

DESCRIPTION.—General color above grayish brown, resulting from the fur, being plumbeous at the base, and tipped with gray and reddish brown; beneath light yellowish lead color; head rather large; ears broad, short, and slightly covered with hair on both sides towards the margin, opening large and apparent; eyes moderately large, black and unconcealed; whiskers few and blackish; tail short and sparsely covered with short stiff hairs; legs and feet slender; toes, four, with a rudiment of a fifth on the fore feet, the second toe longest and the outer shortest; five toes behind, the

THE MEADOW MOUSE.

three middle ones nearly equal. Length of the specimen from which the above description was made, 5 inches; tail 2 inches.

HISTORY.—We have doubtless as many as two or three species belonging to this genus, but they have not been sufficiently examined to enable me to speak with confidence respecting them. Meadow mice are quite common in most parts of the state, and at times they become so greatly multiplied as to do much injury to the meadows and to the stacks of hay and grain. They have their burrows in the banks of streams, and under old stumps, logs and fences; and in neighborhoods where they are plenty, numerous furrows may be seen along the roots of the grass, forming lanes in which they may travel in various directions from their burrows. Their nests are sometimes constructed in their burrows, and are also found at the season of hay harvest, in great numbers, among the vegetation upon the surface of the ground. They are built of coarse straw, lined with fine soft leaves, somewhat in the manner of a bird's nest, with this difference, that they are covered at the top, and the passage into them is from beneath. These nests frequently contain 6 or 8 young ones. The meadow mice, though very prolific, have many enemies which serve in a measure to check their undue multiplication. Large numbers of them are destroyed by owls, hawks, foxes, cats, &c., and the country people, when at labor in the field, are vigilant in putting them to death.

GENUS *Mus*.—Linnaeus.

Generic Characters.—Teeth 16—Incisors $\frac{2}{2}$, no canines, grinders $\frac{3}{3}$ — $\frac{3}{3}$. The grinders are furnished with blunt tubercles. Destitute of cheek pouches; fore feet with four toes, and a wart in the place of a thumb, covered with an obtuse nail; hind feet with five toes; nails long, sharp, and incurved; tail long, tapering, naked, and scaly; some part of the hair of the body longer and stiffer than the rest; ears oblong, or round.

THE NORWAY RAT.

Mus decumanus.—PALL.

DESCRIPTION.—General color, light reddish-brown intermingled with ash, lighter and grayish beneath; feet pale flesh colored, and nearly naked; tail nearly as long as the body, covered with small dusky scales, with short stiff hairs thinly scattered among them; four toes and a small tubercle in place of a thumb before, five behind; nails small, light horn color,

THE NORWAY OR BROWN RAT.

and slightly curved; whiskers of unequal length, partly black and partly white. Total length of the specimen before me, which is a female, from the snout to the tip of the tail, 16 inches; head 1.8; body 7.5; tail 6.7. Six pectoral and six ventral mammae.

HISTORY.—This rat, which is at present the common rat of the United States, is supposed to have been originally a native of Persia, or India, and was first known in Europe in the early part of the 18th century. It was carried to England, about the year 1750, in the timber ships from Norway, and from this circumstance it received the name of *Norway Rat*. From Europe it was brought over to America, about the commencement of the American Revolution, and is now diffused over the greater part of the continent. The Norway, or, as often called, the Brown rat is very prolific, bringing forth from 10 to 16 at a litter, and but for its numerous enemies, and its own rapacious disposition, it would soon become an intolerable pest. Happily, however, for man, they are not only destroyed by weasels, cats, and dogs, but they are very destructive enemies to one another, both in the young and adult state. They are sometimes caught in traps, but on account of their caution and cunning it requires much art. The surest way of destroying them is by poison, and arsenic is commonly used for that purpose, but so many fatal accidents occur from having this poison about our buildings, that its use is not to be recommended. If poison is to be used for the destruction of rats, the powder of *nux vomica*, mixed with meal and scented with oil of rhodium, should be employed, and it is found very effectual for that purpose. The brown rat is a deadly enemy to the black rat, and destroys it, or drives it from the neighborhood. It also destroys mice. But it does not confine itself to the destruction of noxious animals. It often devours eggs, chickens, and the young of other domestic fowls. It however becomes the greatest nuisance and does most mischief by the destruction of grain, fruit, roots &c. in our granaries and cellars. The graphic character given it by Dr. Godman will not be disputed by any who are acquainted with its habits. "It must be confessed," says the Doctor, "that this rat is one of the veriest scoundrels in the brute creation, though it is a misfortune in him rather than a fault, since he acts solely in obedience to the impulses of nature, is guided by no other law than his own will, and submits to no restraints, but such as are imposed by force. He is, therefore, by

THE BLACK RAT.

no means as bad as the scoundrels of a higher order of beings, who, endowed with superior powers of intelligence, and enjoying the advantages of education, do still act as if they possessed all the villainous qualities of the rat, without being able to offer a similar apology for their conduct. Among quadrupeds this rat may be considered as occupying the same rank as the crow does among birds. He is one of the most impudent, troublesome, mischievous, wicked wretches that ever infested the habitations of man. To the most wily cunning he adds a fierceness and malignity of disposition that frequently renders him a dangerous enemy, and a destroyer of every living creature he can master. He is a pure thief, stealing not only articles of food, for which his hunger would be a sufficient justification, but substances which can be of no possible utility to him. When he gains access to a library he does not hesitate to *translate* and appropriate to his own use the works of the most learned authors, and is not so readily detected as some of his brother pirates of the human kind, since he does not carry off his prize entire, but cuts it into pieces before he conveys it to his den. He is, in short, possessed of no one quality to save him from being universally despised, and his character inspires no stronger feeling than contempt, even in those who are under the necessity of putting him to death."*

THE BLACK RAT.

Mus rattus.—LINN.

DESCRIPTION.—Head elongated; snout pointed; lower jaw very short; eyes large and projecting; ears naked, large, broad and nearly ovate; whiskers long; five flat toes on the hind feet, and on the fore feet four, with a nail representing a thumb; lateral nails, both behind and before, very short; tail nearly naked, and furnished with scales disposed in rings, amounting in some cases to 250; color cinerous black, lighter beneath; whiskers black; top of the feet covered with small white hairs; mammae 12. Length of the head and body 7 inches, tail 7.5 inches.

HISTORY.—It seems to be a matter of some doubt whether this Rat is indigenous in this country or was introduced from Europe. But whether introduced, or indigenous, it is certain that they were very numerous here before the introduction of the preceding species. It is stated by Dr. Williams† that neither the Norway rat, nor the Black rat, was known in Ver-

THE COMMON MOUSE.

mont till some time after the settlement of the state was commenced, but that, when he wrote, they had become quite common. The Norway or Brown rat is now the common rat in all the older parts of the state; and yet it is but a few years since it was said that none of these rats had ever been seen in the county of Orleans.

THE COMMON MOUSE.

Mus musculus.—LINN.

DESCRIPTION.—Color, dusky gray above and ash gray beneath; forehead, reddish; whiskers, slender, numerous and black; feet, white; nails, reddish with white points; tail, round, sparsely covered with very short hairs, and tapering from the insertion to the extremity; ears large. Total length about seven inches, of which the tail constitutes one half. A variety of this mouse which is wholly white is frequently met with in the neighborhood of lake Champlain, on both sides of the lake, and another variety, less common, is white spotted with black.

HISTORY.—This mischievous little creature, like the preceding, did not exist in North America at the time of the discovery of this continent by the Europeans, but finding its way over in ships, in bales of merchandize, &c., by its great fecundity it filled the country with a rapidity equal to the advancement of the new settlement, and is now very common throughout all the settled parts of the continent. This mouse takes up his residence chiefly in houses, barns and granaries, where he is often exceedingly troublesome, and does much mischief. He is very apt to find his way into cellars and pantries, often by gnawing holes through boards, and he is sure to nibble every kind of eatable that falls in his way. On this account, and on account of the peculiar odor which he communicates to the places which he frequents, the mouse, though a beautiful and sprightly creature, is every where regarded with disgust. The mouse builds its nest very much like that of a bird, lining the inside with wool, cotton or other soft materials. It brings forth young several times during the year, and has from 6 to 10 at a litter, so that its multiplication, when unchecked, is exceedingly rapid. Aristotle, in his history of animals, mentions that a pregnant female of this species was shut up in a chest of grain, and in a short time 120 individuals were counted, from which it would appear that the mouse was as much distinguished on account of its fecundity 2000 years ago as it is at present.

* Natural History Vol. 2.—page 78.

† History of Vermont, Vol. 1, p. 113.

THE JUMPING MOUSE.

GENUS *GEOMBILLUS*.—*Darmarct.*

Generic Characters.—Teeth, 16—Incisors $\frac{1}{2}$, no canines, grinders $\frac{3}{2}$ — $\frac{3}{2}$. The grinders are tuberculous; the first with three, the second with two and the third with one tubercle. Head elongated; ears moderately long, rounded at the extremity; fore feet short with four toes and a rudimentary thumb; hind feet long, having five toes with nails; each foot with a proper metatarsal bone; tail long, and more or less hairy.



THE JUMPING MOUSE.

Geomys canadensis.—*Desm.*

DESCRIPTION.—General color, yellowish brown above, grayish yellow on the sides, and yellowish white on the belly; tail tapering, longer than the body, sparsely covered with very short hair, and the tuft at the end very small; head small, narrow and pointed; fore legs very short; hind legs very long; nails slender and sharp; ears moderate and covered on both sides with short hair; upper incisors grooved on the outside. Length of the specimen before me, from the nose to the insertion of the tail 4 inches, head 1 inch, body 3 inches, tail 5 inches, hind leg 2 inches, fore leg $\frac{3}{4}$ of an inch.

HISTORY.—This timid and active little animal is frequently met with in the grain fields and meadows in all parts of the state. When not in motion it might be mistaken for a common field mouse; but its usual method of progression is very different. It sometimes runs on all its feet, but it more commonly moves by leaps on its hind legs, particularly when pursued. It will often clear five or six feet at a leap, and its leaps are made in such quick succession that it is not easily caught. On examination, it is found to differ considerably in form from the mouse, particularly in the great disproportion between the fore and hind legs, the latter being more than twice the length of the former. In this respect it resembles the kangaroo of Australasia, and the jerboa of the eastern continent. They pass the winter in a torpid state and are not usually out in the spring before June.

THE WOODCHUCK.

GENUS *ARCTOMYS*.—*Geoffroy.*

Generic Characters.—Teeth 22—Incisors $\frac{1}{2}$, no canines, grinders $\frac{3}{2}$ — $\frac{3}{2}$. The incisors are very strong with the anterior surface rounded; grinders furnished with ridges and tubercles. Body thick and heavy; head and eyes large; ears short; paws strong; fore feet with four toes and a rudimentary thumb, hind feet with five toes; nails strong and compressed; tail generally short, hairy.



THE WOODCHUCK.

Arctomys monax.—*Gmelin.*

DESCRIPTION.—General color, grayish ferruginous brown, paler beneath and approaching to red between the legs; top of the head and nose brown; feet and nails black; whiskers black and stiff, standing in three clusters on each side; tail covered with long reddish brown hair. Length of the specimen before me from the nose to the insertion of the tail 16 $\frac{1}{2}$ inches; head 3 $\frac{1}{2}$ inches, body 13 inches, trunk of the tail 5 inches, with the hair extending 1 $\frac{1}{2}$ inch beyond, fore legs 4 inches, feet 2 $\frac{1}{2}$ inches; longest nail .6 inch; hind legs 4 $\frac{1}{2}$ inches; feet 3 inches; largest nail .4 inch. Weight 5 lbs. This though an adult is not one of the largest size.

HISTORY.—The Woodchuck is a common and well known animal in all parts of the state. They are found both in the woods and open fields, where they reside in pairs or families, in holes which they dig in the ground. These holes are usually made beneath a large rock, or stump, or in the side of some dry bank, and are sometimes very extensive, consisting of several apartments with several openings. In these recesses they form their nests of dry leaves and grass in which they spend much of their time in sleep. Their food is entirely vegetable, of which they eat various kinds. They are particularly fond of clover and beans, and are occasionally injurious to the farmers by the extent of their depredations. When feeding they frequently rise upon their haunches to reconnoitre, raising their fore feet like hands. In this position, when the weather is fine, they will sometimes sit for hours at the entrance of the holes, but they seldom venture far abroad in the day time. On the approach of cold weather they confine themselves to

THE GRAY SQUIRREL.

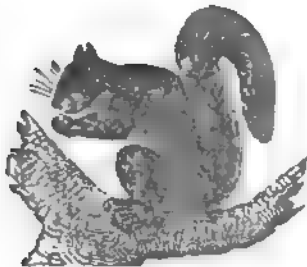
THE BLACK SQUIRREL.

their holes by closing the passage between themselves and the surface of the ground and spend the winter, like bears, in a torpid state.

The Woodchuck is a cleanly animal, is capable of being tamed, in which state it becomes playful and fond of attention. It is a low-set, clumsy animal, and when the retreat to his hole is cut off, he will boldly face a dog in battle, and is fully a match for one of his own size. His bite, with his long and projecting incisors, is very severe. The female produces from four to six at a litter. The weight of a Woodchuck of the largest size in Vermont when fat is 10 or 11 pounds. Its flesh is sometimes eaten, but is not much esteemed. Sometimes called Ground Hog.

GENUS *Sciurus*.—LINNÆUS.

Generic Characters.—Teeth 22—Incisors $\frac{3}{4}$, no canines, grinders $\frac{1}{2}$ — $\frac{1}{2}$. The upper incisors are flat in front and wedge-shaped at the extremity, the lower are pointed and compressed laterally. The grinders are tubercular. Body small and elongated; head small; ears erect; eyes large; fore feet with four toes and a tubercle instead of a thumb; hind feet with five long toes, all furnished with long hooked nails; tail long and frequently stagg; two pectoral and six ventral mammae.



THE GRAY SQUIRREL.

Sciurus cinereus.—GILLIS.

DESCRIPTION.—General color, gray above and white beneath; sides of the head and body, and the exterior of the legs, reddish fawn mixed with gray; inside of the legs and thighs bluish white; tail large and bushy, composed of hairs marked with zones alternately fawn and black, and tipped with white; ears without pencils, rounded and covered with very short hair; whiskers black, $2\frac{1}{2}$ inches long. Length of the specimen before me, from the nose to the insertion of the tail, 10 inches; tail, (trunk $9\frac{1}{2}$, tuft $2\frac{1}{2}$), $11\frac{1}{2}$ inches. Weight $1\frac{1}{2}$ pound.

HISTORY.—According to Dr. Williams, the Gray Squirrel was formerly the most common squirrel in Vermont. It is still

found in considerable numbers but less plentifully at present than some of the smaller species. This as well as some of the other species, in some years, becomes exceedingly multiplied, and then, perhaps, for several years very few of them will be seen. This sudden increase and diminution of their numbers, seems to depend upon two causes, the supply of food and the severity of the winters. Their great multiplication generally follows a mild winter, which was preceded by a productive summer. I believe it to be generally true that when one species becomes very plentiful, the others become so too. The Gray Squirrel prefers woods, which abound in oak, walnut, butternut and chestnut, because these furnish him with such food as he prefers. During the fall they collect a supply of food for the winter, which they carefully deposit in hollow trees or obscure recesses. Their nests which are built with sticks and lined with leaves, are usually placed in the forks of large and lofty trees, or in the hollows of old trees, and in these they spend most of their time during the winter, leaving them only to visit their depositories of food for the purpose of obtaining a supply. This is one of the most active and beautiful of our squirrels. It is easily tamed, and, in captivity, is remarkably playful, but rather disposed to be mischievous, often using its teeth to the injury of the furniture. About a century ago these squirrels were so troublesome in Pennsylvania that government granted a premium of 3d a head for their destruction, which in 1749, amounted to £8,000 sterling; from which it would appear the number killed in one year was about 1,200,000.

THE BLACK SQUIRREL.

Sciurus niger.—LINNÆUS.

DESCRIPTION.—Top of the head, back, tail and extremities of the feet, covered with hair of a deep black color; throat, breast and belly brownish black, lighter on the flanks; ears short, black, and not pencilled; smaller and the tail proportionally shorter, and the fur softer than in the preceding species. Length of the head and body about 8 inches.

HISTORY.—The Black Squirrel is much less common in Vermont than the gray squirrel, particularly in the western parts, and is perhaps, frequently confounded with a blackish variety of the gray squirrel. Having obtained no specimen of this squirrel, I have copied, above, the description contained in Dr. Harlan's *Fauna Americana*. According to Dr. Will-

THE RED SQUIRREL.

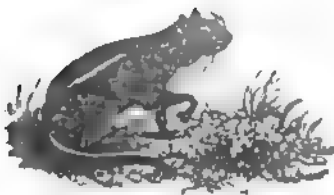
iams our largest black squirrels weigh but 2½ lbs., while our largest gray squirrels weigh 3½ lbs.

THE RED SQUIRREL.

Sciurus Hudsonius.—Gmel.

DESCRIPTION.—Color, reddish gray above, and whitish beneath, with a dark line extending along each side, separating the color above from that below; eyes black; whiskers long and black; hairs of the tail cimerous at their base and then black, tipped with red on the upper side, and with yellow on the under. Length of the specimen before me, from the nose to the insertion of the tail, 7¼ inches; tail, (trunk 5, hair 1,) 6 inches.

HISTORY.—This animal is every where known in Vermont by the name of Red Squirrel. They are much more common than either of the preceding species, and in some seasons they have multiplied so exceedingly as to be a great annoyance to the farmer, and do considerable damage by their depredations. They spend most of their time in the tops of trees, feeding upon nuts of various kinds, and upon the seeds contained in the burs of spruce and hemlock. Their nests are usually in the hollow of some old tree, and here they lay up for winter their store of provisions, often amounting to several gallons, and consisting of butternuts, beechnuts, acorns, and different kinds of grain. Their food in summer consists of grain, sweet apples, and different kinds of berries, as well as nuts. In the fall and early part of winter they often come around our barns, and purloin their subsistence from our granaries. This squirrel is often called the *Chickaree*, probably from its noisy chatter when alarmed. It is also called the *Hudson*, or *Hudson Bay Squirrel*.



THE STRIPED SQUIRREL.

Sciurus Striatus.—Klein.

DESCRIPTION.—Top of the head dark reddish gray; eye-lids whitish; neck gray; back striped, having a black stripe along the spine, then on each side a broad reddish gray stripe, then another black stripe, succeeded by a white stripe, and,

THE STRIPED SQUIRREL.

lastly, a reddish brown stripe; the throat, belly, and inner surface of the legs, white; head tapering from the ears to the nose; forehead slightly convex; nose covered with short hairs, with a black spot near the extremity; ears short, rounded, and covered with very fine hair, which is reddish brown within; tail less bushy than in the preceding species, blackish above, and red beneath, bordered with gray. Length of the specimen before me, from the nose to the insertion of the tail, 6 inches; tail (trunk 3½ in., tuft ¼ in.) 4 inches.

HISTORY.—The Striped Squirrel is more common in Vermont than either of the preceding species, and differs from them in being furnished with cheek pouches, in which it carries the food it collects, to its store-house. It also differs from the preceding in having its chief residence in the ground, while the others inhabit hollow trees, and hence it has received the name of *Ground Squirrel*. It is likewise frequently called the *Chipmuck*, or *Chipping Squirrel*, from its note; and it is also called in many places the *Hackee*.

This squirrel is generally seen running along upon the lower rail of fences, or sitting upon stone walls or logs. When frightened they immediately retreat to their holes, which they enter with a peculiarly shrill *chut-ta-rie*, indicative of safety, which is as much as to say, "catch me now if you can." When their retreat to their hole is cut off, they become much alarmed, and, in such cases, will sometimes ascend trees, but they betray much timidity, and will seldom go up more than 20 or 30 feet. Their burrows are by the side of stone walls, fences, or the roots of trees, and in places where their food is easily obtained. These burrows are often extensive, with two openings, at considerable distance from each other, and what is remarkable, is that the dirt which has been removed in making the excavation, is no where to be found. This squirrel retires to its burrow on the approach of cold weather, where it spends the winter, subsisting upon its stores of nuts and seeds, which it had carefully provided, and being seldom seen after the beginning of November, before the first of April.

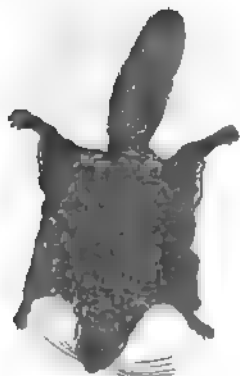
GENUS PYRONTIS.—Cuvier.

Generic Characters.—Teeth 22—Incisors, 2, no canines, grinders, 4-4. Head round; ears short and rounded; eyes large; fore feet with four elongated toes, furnished with sharp nails and a rudimentary thumb, having an obtuse nail; hind feet with five long toes, much divided,

THE FLYING SQUIRREL.

THE HEDGE HOG.

and adapted for seizing; tail long, villose; skin of the sides extending from the anterior to the posterior extremities forming a kind of parachute.



THE FLYING SQUIRREL.

Pteromys volucella.—DUMARÉT.

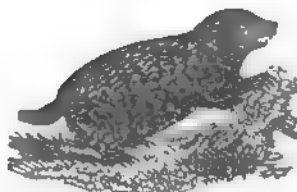
DESCRIPTION.—General color, reddish gray above, yellowish white beneath; head large; nose rounded; eyes large, black, prominent, and far apart, and surrounded by a blackish ash color, with a white spot over each; ears broad, rounded, and nearly naked; whiskers black, two inches long; tail long, thickly covered with fine long fur, brown above, lighter beneath, and flattened; a bony appendage, about an inch long, proceeding from the wrist, and used in stretching the flying membrane. Length of the specimen before me, from the nose to the insertion of the tail, 6 inches; tail $5\frac{1}{2}$ inches; spread of the membrane, measured across the breast, $6\frac{1}{2}$ inches.

HISTORY.—This interesting little animal is frequently met with, living in families, in all parts of the State, but is never so greatly multiplied as some of the preceding species of squirrels. They usually inhabit the hollows of trees, and feed upon nuts, grains, seeds and buds. Their wings are not calculated for rising in the air and flying in the manner of bats and birds. Consisting only of an extension of the skin of the flanks, they form only a kind of parachute, by which they are supported for a while in the air, and are thus enabled to sail from one tree to another at a distance of several rods. In proceeding through the forests, they first ascend high upon a tree, and, leaping off in the direction of another tree, and at the same time spreading their wings, they are enabled to sail, while descending, to a considerable distance, and to alight on the tree designated, near the ground. This

they ascend, and proceed in like manner to another tree, thus passing to a considerable distance without coming to the ground. Their habits are nocturnal, and, unless disturbed, they seldom leave their nests in the day time. When this animal sleeps, it rolls itself up, and so wraps its large flat tail over its head and limbs as completely to conceal them, and give it the appearance of a simple ball of fur. The flying squirrel is often tamed as a pet, but is more admired on account of its singular form, soft fur, and gentle disposition, than for its sprightliness and activity.

GENUS HYSTRIX.—Linnaeus.

Generic Characters.—Teeth 20—Incisors, $\frac{3}{4}$, no canines, grinders $\frac{1}{2}$ — $\frac{1}{4}$. The grinders have flat tops, but are furnished with ridges of enamel. Head strong and convex; muzzle thick and turned; ears short and rounded; tongue furrowed with spiny scales; fore feet, with four toes, and the rudiment of a thumb; hind feet with five toes; nails strong on all the feet; body covered with spines, intermixed with strong hair; tail more or less long, and sometimes prehensile.



THE HEDGE HOG.

Hystrix dorsata.—Gmelin.

DESCRIPTION.—General color, brownish black; hair rather long, thick, and interspersed with spines or quills, which vary from 1 to 4 inches in length; quills black at the tip, below brownish, and white towards their base. Ears small, and covered by the hair; snout short and thick. Legs and feet covered with hair, the latter armed with long curved nails. Tail thick, flattened, and not prehensile. Length 26 inches; tail 8; height of the back 14.

HISTORY.—The Hedge Hog was originally very common in Vermont, but is now confined principally to the mountainous and woody parts, where it is still found in considerable numbers. This animal is remarkable, principally, on account of the quills or spines, which are intermingled with the hair, on nearly all parts of its body; and as he runs very badly, and is moderate and awkward in all his move-

THE AMERICAN RABBIT.

THE VARYING HARE.

ments, he relies mostly upon his quills for defence and safety. When his enemy approaches, if allowed sufficient time, he will generally retreat to a fissure among the rocks, or take refuge in the top of a tree, which he ascends with facility; but, if overtaken, he places his head between his fore legs, draws his body into a globular form, and erects his barbed spines, which now project in all directions. In this condition they defy the attack of all enemies but man. The fox, the wolf and the dog attempt to seize him only to be severely wounded in the nose and mouth by the sharp projecting quills. These quills, being barbed at the extremity, and adhering in the wound, are detached from the owner, and by their rankling, and by penetrating deeper and deeper, not only discourage the attack of the assailant, but very often occasion his death. The vulgar notion that this animal has the power of projecting or shooting his quills at his assailant, is without a shadow of foundation.

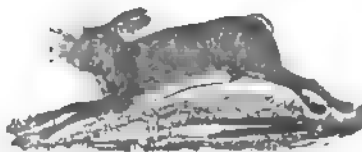
The quills of the Hedge Hog are highly prized by the aborigines on all parts of the continent, and are used by them in various ways as ornaments of their dresses, pipes and war instruments. For this purpose they are dyed of several rich and permanent colors, cut into short pieces, strung upon threads or sinews, and then wrought into various forms and figures upon their belts, buffalo robes, moccasins, &c., and in these operations they manifest considerable ingenuity and a great deal of patient perseverance.

The Hedge Hog is a solitary, sluggish animal, seldom venturing to much distance from his retreat among the rocks. Their food consists of fruits of different kinds, roots, herbs, and the bark and buds of trees. Their flesh is sometimes eaten, and is esteemed by the Indians as the greatest luxury. They have three or four young at a litter, and their period of gestation is said to be 40 days. The Hedge Hog or American Porcupine, when full grown and fat, weighs about 16 pounds.

GENUS *LEPUS*.—*Linnaeus*.

Generic Characters.—Teeth, 28—Incisors $\frac{1}{2}$, no canines, grinders $\frac{3}{4}$. The upper incisors are placed in pairs, two wedge-shaped with a longitudinal furrow in front, and two smaller ones intermediately behind; the under incisors square, grinders with flat crowns and transverse laminae of enamel. Head rather large; ears long; eyes large, projecting laterally; fore feet with five toes; hind feet with four very long toes; all the toes armed with moderate sized nails, which are slightly arched; bottoms of the feet

hairy; tail short, hairy and elevated; mammae from 6 to 10.



THE AMERICAN RABBIT.

Lepus americanus.

DESCRIPTION.—Color, above grayish fawn, varied with blackish brown and reddish; more red about the shoulders than elsewhere; a whitish spot before the eyes and another behind the cheeks; breast and belly white; feet reddish before with the point of the foot fawn color; upper part of the tail the color of the back, beneath white, fur on the body white in winter, but the ears and tail are of the same gray color summer and winter. Length 14 inches, head $3\frac{1}{2}$ ears $2\frac{1}{2}$, tail 2 inches.

HISTORY.—This animal though strictly a Hare has acquired very generally in this country the name of Rabbit. Indeed the name of Rabbit is not only applied to this species, but also to the following, and this is distinguished by the appellation of Grey rabbit, on account of its not becoming so white in the winter as the other. This is the most common species of hare throughout the United States, and is also one of the most prolific species. It produces its young three or four times in the course of the year and has from five to seven at a birth. This animal has been supposed to form burrows in the earth like the European Rabbit, but this is probably a mistake. It is true they are sometimes found in burrows, but it is believed to be only in cases in which they have taken refuge in the holes of foxes or woodchucks.

THE VARYING HARE.

Lepus virginianus.—*HARLAN*.

DESCRIPTION.—General color, in its summer dress, reddish brown, darkest along the back, lighter about the shoulders, and passing into white on the belly. Hairs on the upper parts bluish at their base, then light reddish yellow, and tipped with black. Chin and ears bluish white mixed with reddish brown, the latter margined exteriorly, towards the tip, with black, and slightly edged with white; orbits surrounded by reddish fawn; flanks tinged with orange; sides of the feet whitish; soles covered with long hair of a

THE VARTING HARE.

tawny yellow color. Ears and head of equal length; tail very short; nails long, slightly arched, compressed at the base, and entirely covered by the hair. Incisors above and below nearly equal, the former slightly arched and marked by a longitudinal groove. Length of the specimen before me, which was taken in September, from the nose to the root of the tail, 16 inches; tail, including the fur, $1\frac{1}{2}$; ears $3\frac{1}{2}$; hind foot, $5\frac{1}{4}$. Color, in its winter dress, white, or nearly so, resulting from the hairs being bluish at their base, then yellowish fawn, tipped with white.

HISTORY.—This hare is quite common in Vermont, and, in the winter season, is usually called the white rabbit. It is less prolific than the preceding species, producing its young only once or twice a year, and having from 4 to 6 at a time. The young are able to see at birth, and are covered with hair. They are able to provide for themselves in a very few days, after which they receive but little aid from their mothers. The hares feed in summer upon grass, juicy herbs, and the leaves and buds of shrubs, but in winter, when the snow is deep, they gain a precarious subsistence from the buds and bark of bushes and small trees. The bark of the willow, birch, poplar, and the buds of the pine, are with them favorite articles of food. The hares are the most timid and defenceless of all quadrupeds, and no animals have more numerous or formidable enemies. They are pursued and destroyed in great numbers, by men and dogs, by eagles, hawks, and owls, and by all the carnivorous beasts of the forests; and yet, notwithstanding this destruction, nature has sufficiently provided, in their great fecundity, for the preservation of the several species. When pursued, the American rabbit soon becomes wearied, and to avoid being overtaken, takes shelter in some hole in the earth, in a heap of logs, or stones, or in a hollow log, but this species is so fleet as to be in no fear of being overtaken by its pursuers, and, therefore, does not seek concealment. It has been ascertained by measurement that it can leap 21 feet at a bound, and its body is so light in comparison with its broad furry feet that it is enabled to skim easily along the surface of deep snows, while the wearied hounds plunge in at every bound, and soon give up the hopeless pursuit. The skin of the hare is of no value, but the flesh is considered nourishing food.

ORDER RUMINANTIA.

Animals of this order have three kinds of teeth. They have no incisors in the upper jaw, but have usually eight in the

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THE MOOSE.

lower, which are opposed to a callosity on the upper gums. In some species there are canines only in the upper jaw, and others have them in both. The grinders are twelve in each jaw, marked with two double crescents of enamel on their crowns, of which the convexity is outwards in the lower, and internal in the upper jaw; articulations of the jaw adapted for a triturating motion. The limbs are disposed for walking; the feet with two hooped toes; the two bones of the metacarpus and metatarsus, consolidated into one; organs of digestion calculated for ruminating, consisting of four stomachs; intestines long; two or four inguinal mammae. The males have horns, and the females, too, in some species; food always vegetable. The most remarkable faculty of these animals is that of rumination, or of returning the food into the mouth for the purpose of chewing it a second time, called *chewing the cud*, and hence the name of the order, *Ruminantia*.

GENUS CERVUS.—LINNÆUS.

Generic Characters. Teeth 32, or 34—

Incisors $\frac{1}{2}$ —canines $\frac{1}{2}$ — $\frac{1}{2}$ or $\frac{1}{2}$ —grinders $\frac{1}{2}$ — $\frac{1}{2}$. The canines, when they exist, are bent back and compressed. Head long, terminated by a muzzle, eyes large, pupils elongated transversely; most of the species have a lachrymal sinus; ears long and pointed; tongue soft, horns solid, deciduous, palmated, branched, or simple, in the males; females destitute of horns, except in one species; four inguinal mammae.



THE MOOSE.

Cervus alces.—LINNÆUS.

DESCRIPTION.—Head long, narrow before the eyes and enlarged towards the mouth, which has some analogy to that of the horse; upper lip exceedingly developed and very thick. Nostrils, a lateral slit, more open and widely than behind; eyes small, near the base of the horns,

THE MOOSE.

lachrymal pits small; neck short; ears very large and thick; horns, consisting of a very large flattened expansion, furnished with numerous prongs on the external border, with a large isolated branch of the principal stock. Tail excessively short. A tuft of long hair, like beard, beneath the throat, in both sexes, and a protuberance in the same place in the male. Legs long; feet long, and placed obliquely on the soil. Hair coarse and friable. General color fawn-brown. Dimensions, as given by Dr. Harlan: length from the nose to the base of the tail, 6 ft. 10 in.; height before, 5 ft. 2½ in.—behind, 5 ft. 4½ in.; length of the head, 23 in.; ears, 10 in.; horns, 37 in.; neck, 18 in.; tail, 1½ inch. Weight of the horns sometimes 60 pounds.

HISTORY.—Moose were formerly very plentiful in Vermont, and in many places the early settlers depended upon their flesh for no inconsiderable part of the subsistence of their families. They are now exterminated from all portions of the state excepting the county of Essex, in the northeastern part. There they are still found, and several were killed there during the two last winters. The head and horns of one of these, obtained by Judge Parker, of Orleans, and now in his possession, weighed 95 pounds, of which the horns are supposed to constitute one half. The hide and quarters of this Moose, when dressed, weighed a little more than 800 lbs. The height of its horns exceeded 3 feet, and the distance between their tips was more than 5 feet, and larger than this are not often found at the present day. But it would appear from the statement of Dr. Williams that larger individuals were taken in early times. He says that one of these animals in Vermont was found by measure to be 7 feet high, and that the largest Moose were estimated by the hunters to weigh from 1300 to 1400 pounds. The food of the Moose consists of grass, shrubs, the boughs and bark of trees, especially the beech, which they seem to prefer above all others, and a species of maple, *Acer pennsylvanicum*, which is called *Moosewood*. In summer they keep pretty much in families. In winter they herd together, sometimes to the number of 20 or 30 in a company. They seem to prefer cold places; and when the snow is deep they tread it down for a space of several acres, forming what is called a *yard*. Within this space they range, and subsist upon the twigs and bark of the trees, while the snow remains deep upon the ground. In order to eat from the ground, they are obliged to kneel or spread their fore legs, on account of the shortness of

THE ELK.

their neck. They move with a long shambling trot, and with a rattling of their hoofs, which may be heard at a considerable distance. Their course is swift and straight, and they leap over the highest fences with ease. The males only have horns, which are shed and reproduced annually. The rutting season is in September, and the young are produced about the first of June, usually two at a birth. The female is smaller than the male.* This animal was called *Monsall* by the Algonquin Indians, *Orignal* by the French inhabitants of Canada, and *Moose*, or *Moose Deer*, by the English.†

Since the above was written, I have had an opportunity of examining a living Moose in Burlington. It was a female, two years old, and had then been in captivity about two months, having been taken in Canada, near the north line of this state, in March, 1842. The height at the shoulder was about 6 feet, and it agreed fully with my description, so far as it is applicable to the female, that sex being without horns. It had become so tame as to be led by a halter without difficulty.

THE ELK.

Cervus canadensis.—GMEL.

DESCRIPTION.—Head well formed, tapering to a narrow point; ears large and rapidly moveable; eyes full and dark; horns lofty, graceful, with numerous pointed cylindrical branches, which curve forward. The hair is of a bluish gray color in autumn; dark gray during the winter, and at the approach of spring assumes a reddish, or bright brown color, which it retains during the summer. The croup of a pale yellowish white or clay color. Colors nearly the same in the two sexes; but the females are without horns. Height at the withers, according to Dr. Harlan, 4 feet, the horns 3 feet, first antler 1 foot, second 10 inches, length of the tail 2 inches.

HISTORY.—The horns of the elk have been often found in Vermont, which may be regarded as sufficient proof of the former existence of that animal within the state; and if the animal was found here after the settlement of the state was commenced, it is doubtless now completely exterminated. Elks live in families. Their rutting season is in September, and the young, one and sometimes two in number, are produced in July. Their horns are generally shed in March. This species is said to be still found in numbers

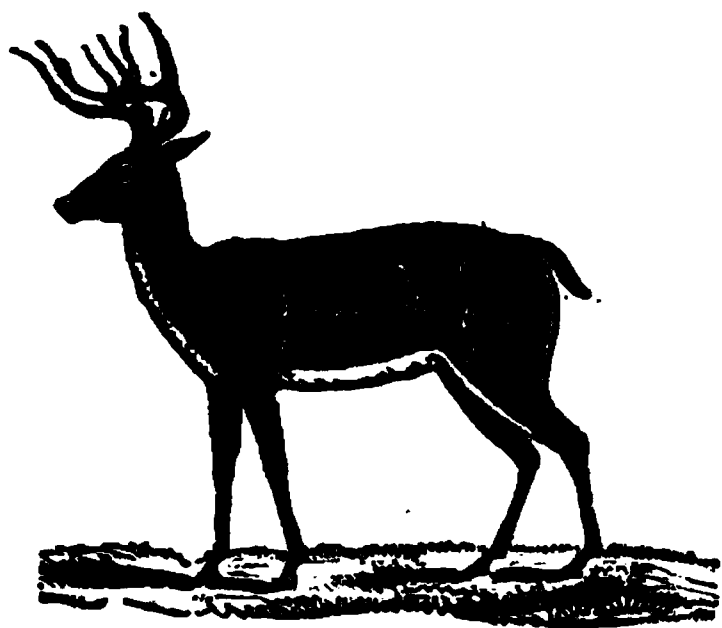
* Williams' History, Vol. 1, p. 99.

† Harlan, Fauna Americana, p. 239.

THE COMMON DEER.

DOMESTIC QUADRUPEDS.

in the western states. A specimen of this species, preserved in the Philadelphia Museum, measures seven feet and seven inches from the tip of the nose to the base of the tail, and the horns measure three feet and ten inches. The animal was 13 years old.



THE COMMON DEER.

Cervus virginianus.—Gmel.

DESCRIPTION.—Form light and slender; color reddish fawn in summer, and grayish in winter; horns moderate, with an antler placed high on the inside of each shaft, and two or three others on the posterior side, turned backwards, but varying with the age of the animal; lachrymal pits formed by a fold in the skin; muzzle partially developed; tail proportionally longer than in the preceding species, and thin; no canine teeth. Length 5 feet 5 inches, tail 10 inches, height 3 feet, length of the head 12 inches, of the horns, following the curvature, 22 inches. Weight from 90 to 130 pounds.

HISTORY.—When the country was new this deer was one of the most common and valuable quadrupeds found in our forests, and upon its flesh were the first settlers of the state, to a very considerable extent, dependent for food. Indeed so eagerly was it hunted, and still so anxious were the people for its preservation, that a law for its protection from the 10th of December to the 10th of June was one of the earliest acts of our legislature. But notwithstanding all that has been done for their preservation, their numbers have been constantly diminishing within the state, till they have become exceedingly scarce, except in a few of the most unsettled and woody sections. The range of this species is very extensive, reaching from Canada to the Orinoco in South America. In its form this deer is slender and delicate; and its neck and tail proportionally longer than in

most other species; but at the same time it possesses great muscular power, and runs with surprising speed. It is a very timid and shy animal, and, possessing a keen sense of hearing and smelling, it is found to be very difficult to approach within gun shot of him without his taking alarm. In the fall the deer are in good condition, and the venison valuable. In the winter they herd together, and, when the snow is deep, they form what are called "yards," where they tread down the snow and gain a scanty subsistence by browsing the trees and bushes. During this period they become very lean, and neither the skin nor the flesh is of much value. They produce their young in the early part of summer, and have two, and sometimes three, at a birth. The fawns are at first reddish, spotted with white. They lose their spots in autumn and become gray in winter. This coat is shed about the first of June and in summer they are nearly red, which color continues till August and then changes to blue. The skin is said to be thinnest in the gray, toughest in the red and thickest in the blue; the skin and the flesh being most valuable in the blue. The horns of the male are shed in January. The deer is said to manifest great enmity to the Rattlesnake. When it discovers one of these reptiles, it leaps into the air above it and alights upon it with all four of its feet brought together in the form of a square, and this operation is repeated till the hated reptile is destroyed.

DOMESTIC QUADRUPEDS.

Thus far we have confined ourselves to an account of the Quadrupeds which have been found in Vermont in a wild state. In addition to these we have several quadrupeds which have been introduced and are kept in a domesticated state. The following is a list of such as may be regarded as permanent residents.

ORDER CARNIVORA.

<i>Canis familiaris</i> ,	The Dog.
<i>Felis catus</i> ,	The Cat.

ORDER PACHYDERMATA.

<i>Equus caballus</i> ,	The Horse.
<i>Equus asinus</i> ,	The Ass.
<i>Sus scrofa</i> ,	The Hog.

ORDER RUMINANTIA.

<i>Bos taurus</i> ,	The Ox.
<i>Ovis aries</i> ,	The Sheep.

There are a few other Quadrupeds, which are sometimes kept as a matter of curiosity, such as the Goat, the English Rabbit, the Guinea Pig, &c.

THE DOG.

THE CAT.

THE HORSE.

THE DOG.

Canis familiaris.—LINN.

The Dog has been in a domesticated state from time immemorial; and from him has sprung so great a number of varieties, that it is perhaps impossible to determine which now approaches nearest to the original stock. The dog is mentioned as being a familiar animal nearly two thousand years before the Christian era, but the allusions to him in the Bible seem to imply that he was formerly more sanguinary and savage in his disposition than at present. The dog is the only quadruped which has been the companion of man in every state of society, and in every region and climate of the earth, and no other animal manifests so great and so faithful an attachment to his master as this; and this attachment seems to arise from the purest gratitude, and truest friendship. In works on natural history we have no less than sixty permanent varieties of the dog named and described.* In Vermont, each family in the country usually finds it convenient to keep one dog, and very few have more than one. In our villages a few dogs are kept, (better if fewer,) but as a person's standing in society is not here, as in some countries, indicated by the number of his dogs, the dog mania has never prevailed to any considerable extent, and consequently little pains have been taken to procure rare and popular varieties. As the expense of keeping a dog is generally much more than the profit, and as direful consequences are to be apprehended when dogs are numerous, from the occurrence of hydrophobia among them, we should by no means regret the reduction of the dogs in this state to a moiety of their present number.

THE DOMESTIC CAT.

Felis catus.—LINN.

Our domestic Cat is said by Cuvier to have been originally from the forests of Europe, where it is still found in a wild state. The color of the wild animal is grayish brown on the back and sides, with dark transverse undulations, while below it is lighter colored, and the inside of the thighs and feet are yellowish. There are three bands upon the tail, the inferior third of which is blackish. In the domesticated state this animal varies, as is well known, in the length and fineness of its hair, but infinitely less so than the dog, and is also much less submissive and affectionate. The Cat renders essential service by the destruction of vermin, and

most families consider it to their advantage to keep one at least upon their premises. Cats were formerly held in so high estimation on account of their mousing qualities, that in the 10th century laws were passed in England regulating the price of them. It was also enacted, that "whoever stole or killed the cat that guarded the granary of the prince, should forfeit an ewe, with her fleece and lamb, or as much wheat as, when poured upon a cat, suspended by its tail, (the head touching the floor,) would form a heap high enough to cover the creature to the tip of its tail."

ORDER PACHYDERMATA.

This order is named from the thickness of the skin of the animals which compose it. They have two and sometimes the three kinds of teeth. The four extremities are furnished with toes, variable in number, and terminated with strong nails or hoofs. They have no clavicles; and the organs of digestion are not formed for ruminating. We have no animal of this order existing in Vermont in a wild state, and only three, the Horse, the Ass, and the Hog, which have been introduced.

Genus Equus, LINNÆUS.

Generic Characters.—Teeth 40—Incisors 8, canines 1-1, grinders 8-8. Grinders furrowed on each side with flat crowns, and several ridges of enamel; between the canines and grinders a vacant space. Upper lip capable of considerable motion; eyes large; ears rather large, pointed and erect; feet with a single visible toe, covered with a strong hoof; tail with long hair, or in some species with a tuft at the extremity; two inguinal teats; stomach simple and membranous; intestines and cæcum large.

THE HORSE.

Equus caballus.—LINNÆUS.

This generous and noble spirited animal, next to the sheep and the ox, has probably been the most useful servant of man. At what period he became domesticated we have at present no means of knowing. It must, however, have been soon after the deluge, if not before that event, as there is mention of the horse and his rider in the book of Genesis nearly 2000 years before the Christian era. The horse is the associate and assistant of man in war, in the chase, and in the works of agriculture, of the arts and of commerce. Although wild horses exist at the present day in several parts of the world, yet it is believed that there are now no wild horses, which have descended in a wild state from the original stock.

* Brown's Zoological Text Book, Vol. 1, p. 75.

THE ASS.

THE MULE.

THE HOG.

The wild horses in Asia and America are all descended from such as had been formerly domesticated, and had been set at liberty. These wild horses are said to be very numerous, going in troops upon the prairies at the southwest, and that the Indians supply themselves with horses, by catching and taming them. The period of gestation in the horse is 11 months and in the domesticated state the colt is allowed to suck 5 or 6 months. At the age of two years the sexes are separated; at three they are handled and at four are broke to the saddle and harness, and are capable of service and of propagating without injury to themselves. The life of the horse is from 25 to 30 years, but they are not of much value after they reach 20 years. The age of a horse may be pretty nearly ascertained by his teeth. According to Cuvier the milk teeth appear about 15 days after the colt is foaled; at 2½ years the middle ones are replaced; at 3½ the two following ones; and at 4½ the outermost ones or corners. All these teeth have at first indented crowns, which are gradually worn down by use and entirely effaced at 7 years old. The lower canine teeth appear at 3 years old, and the upper ones at 4. They remain pointed till 6, and begin to peel off at 10.

Vermont produces excellent horses and considerable pains have been taken to introduce the best varieties. The greatest part of the labor upon the farms, and nearly the whole of the travel and transportation in this state is performed by horses, and large numbers of fine horses are annually sent to market out of the state. The whole number of horses in Vermont, (including the mules, which are very few,) according to the returns of 1840, was as follows :

Addison,	5,125	Orange,	6,674
Bennington,	3,397	Orleans,	3,462
Caledonia,	5,352	Rutland,	6,200
Chittenden,	4,231	Washington,	4,360
Fairfax,	1,207	Windham,	4,969
Franklin,	4,427	Windsor,	8,440
Grand Isle,	1,161		
Lamoille,	2,597	Total number,	62,402.

THE ASS.

Equus asinus.—LINNÆUS.

The Ass is distinguished by his long ears, by the tuft which terminates his tail, and by the black cross on his shoulders. His usual color is a brownish gray. He was originally from the great deserts of central Asia, where these animals are still found in a wild state, and where they range in immense herds from north to south, according to the season. The Ass in the domesticated state, is a patient, submissive and serviceable animal, and in many parts of the world is almost the only

one employed as a beast of burden. It is much more sure-footed than the horse, and on that account is much used in rough mountainous countries. The hoarseness of the bray of the Ass is well known, and it is produced by two small, peculiar cavities, situated at the bottom of the larynx. The Ass is not kept in Vermont for its labor, but a very few are kept for the production of Mules from the mare.

THE MULE.—The Mule is an unprolific hybrid, produced betwixt the horse and the ass. When the sire was a horse and the dam a she-ass, the offspring was termed *Hinnus* by the ancients, but when the sire was a jack ass and the dam a mare, it was then called *Mulus*. At some periods a considerable number of Mules have been produced in Vermont, but they have always been reared for exportation, none of them being kept within the state for their labor.

GENUS *Sus*.—LINNÆUS.

Generic Characters.—Teeth 42 or 46—incisors, $\frac{4}{8}$ or $\frac{8}{8}$, canines, $\frac{1}{1}$ — $\frac{1}{1}$, grinders, $\frac{7}{7}$ — $\frac{7}{7}$. Lower incisors directed obliquely forward, the upper ones conical; the canines protruded and bent upwards; grinders simple and tuberculous. Body covered with bristles; nose elongated, cartilaginous and furnished with a particular bone to the snout; feet with four toes, the two middle ones only touching the ground, furnished with strong hoofs.

THE COMMON HOG.

Sus scrofa.—LINNÆUS.

The color of the Hog, in a wild state, is blackish brown mixed with gray. Its tusks strong, prismatic, curved outwards and slightly upwards; its body short and thick; its ears erect, and the young are striped with black and white. In the domestic state it is subject to very great variety, both in form and color. Pork or the flesh of the Hog, has always been to the people of Vermont one of the most important articles of food. When the country was new, the first settlers of the state depended, to a very considerable extent, upon the spontaneous productions of the forests for the means of fattening their hogs. Hogs are extremely fond of acorns, beech nuts, and other nuts, and with these the forests abounded. When, on the occurrence of frosts in autumn, these nuts began to fall from the trees, it was the practice of the early settlers to turn their hogs into the woods and let them run till the setting in of winter and the fall of deep snows, when they were usually found in good condition to be butchered. But on account of the great

THE OX.

THE OX.

number of bears, wolves and catamounts, which embraced every opportunity to destroy them, the fattening of hogs in this way was, at best, a precarious business. In some places, where a considerable number of hogs were turned into the woods together, a person was kept with them to protect them during the day, and collect them into a place of safety for the night, and often has our blood chilled in our veins as we have heard our fathers narrate, with quivering lips, their bloody struggles with bruin for the possession of a favorite hog. Almost every family in the state fattens one hog, or more than one, for their own use, and by most of our farmers, more or less are fattened for market. Hogs are usually butchered in this state when about 20 months old, and their weight when dressed is from 150, to 400 pounds, according to kind and condition. Considerable pains have been taken within a few years to improve our breed of hogs, and several new varieties have been introduced, one of the latest and most approved of which is called the Berkshire Hog. The Hog is a prolific animal, producing young twice a year, and often having 14 pigs at a litter. The period of gestation is 4 months. The hog increases in size for about 5 or 6 years, and sometimes lives 20 years. The number of hogs in the several counties in Vermont, according to the returns of 1840, was as follows:

Addison,	14,305	Lamoille,	7,287
Bennington,	9,900	Orange,	22,516
Caledonia,	18,991	Orleans,	9,750
Chittenden,	25,310	Rutland,	15,563
Essex,	3,639	Washington,	12,150
Franklin,	8,935	Windham,	29,435
Grand Isle,	3,179	Windsor,	22,834

GENUS *Bos*.—*Linnaeus*.

Generic Characters.—Teeth 32 or 30—Incisors $\frac{0}{8}$ or $\frac{0}{8}$, canines $\frac{0}{8}$, grinders $\frac{0}{8}$ — $\frac{0}{8}$. Head large; forehead straight; muzzle square; horns occupying the crest of the forehead; eyes large; ears funnel shaped; dewlaps on the neck; female with an udder, having four teats; tail long and tufted; horns simple, conical, round with various inflections, sometimes directed laterally.

THE OX.

Bos taurus.—*Linnaeus*.

We here use the term *ox* in a general sense, to denote *neat cattle*, the male of which is called bull, and the female cow, although it is ordinarily applied to the male in an altered working state. Neither the native country of the ox, nor the time when he was reclaimed from a wild state, is now certainly known. It must,

however, have been domesticated at a very early period, as the keeping of cattle is mentioned as an occupation before the flood.* After that event the keeping of cattle and sheep afforded the means of subsistence and constituted the principal part of the wealth of a large proportion of the human race; and has continued to do so down to the present time. We read that when Abraham was in Egypt, 180 years before there is any mention of the horse, he was possessed of sheep and oxen;† and this account of the early domestication and acknowledged value of the ox is confirmed by the records of profane history. This animal was held in so high estimation as to be an object of worship in Egypt, and among the Hindoos was highly venerated and believed to be the first animal created. The traditions of the Celtic nations also enrol the cow among the earliest productions, and represent her as a kind of divinity.

Cattle, like most other domesticated animals, have run into a very considerable number of varieties, and it is now, perhaps, impossible to ascertain which approaches nearest to the original stock. The cattle which were first introduced into this country by the early settlers, were such as were the common cattle of Great Britain 150 or 200 years ago, and from these the present stocks have generally descended, and, till within a few years past, very little pains have been taken for their improvement. These, coming from different parts of England, Scotland and Ireland, consisted of many varieties, which here became amalgamated, and which have here formed what may be called the *American stock*, retaining, like our American people, many both of the good and bad qualities of the races from which it is descended. For many years past much pains have been taken to improve the breeds of cattle, particularly in England, and within a few years some of these improved breeds have been introduced into this country. The most approved of these are the Ayrshire and Durham, and these are doubtless in many respects superior to our native cattle. Still, it is the opinion of many, that the proper method of improving stocks of cattle is not by the introduction of foreign materials, but by selecting, for breeders, from our native stocks, the best varieties, and, from these, those individuals which possess the properties desired in the highest perfection. In this way we shall be sure to have a race of cattle which is adapted to our country and climate, and

* Genesis IV—20. † Genesis XII—16.

THE SHEEP.

THE SHEEP.

but a few years would elapse in the pursuance of this policy, before we should be as proud to compare the American stock of cattle with the cattle of foreign countries as we now are to compare the American with foreign nations.

Upon lands which are uneven and rough, the farming operations are carried on to better advantage by oxen than by horses, and on this account large numbers of oxen are kept for labor in Vermont, particularly in the central and eastern parts; but cattle are here raised chiefly for the dairy and for market. No part of our country affords better grazing, and for the production of good beef cattle and good butter and cheese, Vermont may challenge comparison with almost any part of the world. According to the grand list of the state in 1841, there were 31,130 oxen, and 154,669 cows. The number of cattle of every description according to the returns of 1840, was as follows:

Addison,	39,718	Orange,	36,855
Bennington,	16,879	Orleans,	18,293
Caledonia,	32,668	Rutland,	40,029
Chittenden,	24,142	Washington,	25,415
Essex,	6,837	Windham,	42,661
Franklin,	26,965	Windsor,	51,863
Grand Isle,	5,463		
Lamoille,	16,555	Total number,	384,341

GENUS OVIS.—*Linnaeus*.

Generic Characters.—Teeth 32—Incisors $\frac{2}{1}$, canines $\frac{2}{1}$, grinders $\frac{12}{6}$. Horns common to both sexes, often wanting, particularly in the female; thick, angular, wrinkled transversely, pale colored, turning laterally and spirally; ears small; legs slender; hair of two kinds; tail more or less short; two inguinal mammae.

THE SHEEP.

Ovis aries.—*LINN.*

In the 4th chapter of the book of Genesis we read that Abel was a keeper of sheep; from which it appears that this animal has existed in a state of domestication from the very beginning of our race. And we learn from history that man has, in almost all ages of the world, depended upon the sheep for a very considerable share of his food and clothing. In the Scriptures the sheep is frequently mentioned, and the lamb, which is the young of this animal, on account of its gentleness and meekness, was employed under the Mosaic dispensation to prefigure the meek and lowly Jesus—"the Lamb of God which taketh away the sin of the world."*

The sheep first introduced into this country by the European settlers, were of

a large, hardy, coarse woolled variety, and before the commencement of the present century very little pains had been taken to improve their quality or increase their numbers. The first fine woolled sheep introduced were the Merinos, from Spain, in 1802. In that year Chancellor Livingston imported a buck and two ewes into New York, and Col. D. Humphreys imported 200 sheep of this breed, and placed them on his farm near New Haven, Ct. But these sheep attracted very little attention till the embargo of 1808 and the non-intercourse which followed it had cut off the accustomed supply of woollen goods from England. In 1809 and 1810 nearly 400 Merinos were shipped to this country by the Hon. Wm. Jarvis, then American consul at Lisbon, and these, together with about 2,500 imported by others, were distributed over the greater part of the United States. A considerable number of the Merinos introduced into this country by Consul Jarvis were brought by him to Vermont, and placed upon his unrivalled farm in Weathersfield; and from the importations above mentioned nearly all the Merino sheep in the United States have been derived.

History informs us that Merino sheep existed in Spain as early as the days of Augustus Cæsar, and as the name signifies *beyond sea*, they were probably imported thither from some other country. In 1765, 100 Merino bucks and 200 ewes were transported from Spain into Saxony, and subsequently many more. In these Saxony Merinos the wool became much improved, and from this improved race importations have taken place into the United States, under the name of *Saxony sheep*. The first, consisting of only two or three bucks, were imported in 1823, by Col. James Shepherd, of Northampton, Mass. The two following years a considerable number of Saxony sheep were imported by the Messrs. Searles, of Boston, and the year 1826 witnessed the introduction of no less than 2,500. From these and subsequent importations the Saxony sheep are now scattered into various parts of the country, and in many places crossed with the Merino and the coarse woolled sheep. In Vermont they have been introduced into many towns, but are not very generally diffused over the state.

There are, probably, few countries in the world better adapted to the rearing of sheep than New England, and the soil and climate of the hills of Vermont seem to be peculiarly suited to that purpose. Experience has likewise shown that while the Merino and Saxony sheep thrive here in a remarkable manner, their wool suf-

* John 1: 29.

DISEASES OF SHEEP.

fers no deterioration in quality, but with suitable attention is rather improved. Sheep require an airy location, both in summer and winter. In summer they thrive much better in elevated, dry pastures than on low, moist lands. In winter they should be yarded from the last of November till the latter part of April, but should never be crammed, in large numbers, into small or tight enclosures. They should be salted weekly both in summer and winter, and at all seasons have free access to pure water. The best season for lambing is thought to be from the 1st to the 10th of May. The daily allowance of food per head for sheep in winter should be 3 lbs. of hay, or 2 lbs. of hay and half a pint of oat meal, or other food equivalent.

Sheep are subject to several diseases, the most common and fatal of which are the *foot-rot* and *scab*. The most approved remedy for the former consists of 3 parts of blue vitriol and 1 of verdigris pulverized as fine as Indian meal and mixed with a sufficient quantity of sharp vinegar to make it as thick as milk. The vinegar should be nearly as hot as boiling water when poured upon the other ingredients, and the mixture should be stirred briskly while hot. This mixture may

STRUCTURE OF BIRDS.

be put on with a paint-brush, being careful to apply it thoroughly to those parts of the feet which are most inflamed. *For the scab* the best remedy is to immerse the sheep, excepting the head, in a strong decoction of tobacco, scrubbing thoroughly the parts affected. The best time for doing this is immediately after shearing; but it may be done any time during the season. For lambs the decoction should be weaker. *For the bloat* in sheep a great spoonful of castor oil mixed with a teaspoonful of pulverized rhubarb may be given in about a gill of hot water. It may be poured down the sheep's throat with a great spoon.

From 1830 to 1837 wool met with a ready sale, and commanded a high price, in consequence of which the farmers of Vermont, during that period, devoted their chief attention to the production of wool, and the flocks of sheep, in most parts of the state, were increased many fold. The whole number of sheep in the several counties, in 1840, was as follows:

Addison,	261,010	Orange,	156,053
Bennington,	104,721	Orleans,	46,069
Caledonia,	100,886	Rutland,	271,727
Chittenden,	110,774	Washington,	110,872
Essex,	14,188	Windham,	114,336
Franklin,	87,325	Windsor,	234,826
Grand Isle,	27,451		
Lamoille,	40,920	Total number,	1,681,818

CHAPTER III.

BIRDS OF VERMONT.

Preliminary Observations.

Birds are organized for flight; have a double respiratory and circulating system, and produce their young by eggs. They are distinguished from all other vertebrated animals by being clothed with feathers. Their whole structure is adapted for flying. Their bones are hard and hollow, which give them at the same time lightness and strength. Their lungs are attached to their ribs, and are composed of membranes penetrated by orifices, which permit a free passage of the air into almost all parts of the body. Birds have long necks, and bills composed of horny substance, but they are always destitute of teeth. Their organ of smell is situated at the base of the bill, and is generally hid by the feathers. Their

tongue is principally cartilaginous, and their taste probably imperfect. Their eyes are so constructed that their sight is very acute, whether the object be near or distant. In addition to the eye-lids, they have a membranous curtain to cover and protect the eye. Birds which fly by day have no external ear, but owls, or such as fly by night, have one, but it is not so much developed as in quadrupeds. The brain of birds is remarkably large. Their wind-pipe consists of entire rings, and, at the lower end, where it branches off to the lungs, it is furnished with a glottis. This is called the lower larynx, and with this the voice of birds is produced, which has great compass, owing to the large volume of air contained in the air vessels.

Most birds undergo two moults annual-

ORDERS OF BIRDS.

GENERA AND SPECIES.

ly. In some species the winter plumage differs considerably from that of the summer; and the male and female also vary in color in many species. The digestion of birds is rapid in proportion to the activity of their life and the force of their respiration. Their stomach is composed of three parts; namely, a crop, a membranous stomach, and a gizzard. The gizzard is armed with two strong muscles, and, by the assistance of small stones, which the fowl swallows, grinds up the food, and thus performs the office of mastication.

The velocity with which birds travel through the air exceeds that of any terrestrial animal. Eagles, and many other birds, fly at the rate of 60 miles an hour. Most birds are migratory, very few comparatively spending the whole year in the same neighborhood. The crow, the partridge, and a few species of woodpeckers, owls, hawks, and water fowl, are all which are known to reside permanently in Vermont. Several species are seen here in winter which are never seen in summer, and many are seen to pass northerly in the spring and return to the south in the fall, which make scarcely any stop with us.

The characters by which birds are distinguished into orders and genera are derived principally from the formation of the bill and feet. We have adopted the classification of Temminck, which is followed by Mr. Nuttall, in his valuable Manual of Ornithology. The following are the Orders.

I. *Rapaces*—birds of prey.

II. *Omnivores*—living on all kinds of food.

III. *Insectivores*—feeding on insects.

IV. *Granivores*—feeding on grain

V. *Zygodactyli*—with the toes disposed in opposite pairs.

VI. *Tenuirostres*—birds with slender bills.

VII. *Alcyones*—with three toes before, united, and one behind; the tarsi being very short.

VIII. *Chelidones*—with three toes before, divided, or only united at the base by a short membrane; the back toe often reversible.

IX. *Columbae*—with toes before entirely divided, and one behind.

X. *Gallinae*—with three toes before, united by a membrane; the back toe joined to the tarsus above the joint of the other toes.

XI. *Grallatores*—with long slender legs, naked above the knee; three toes before and one behind, all nearly on the same level.

XII. *Pinnatipedes*—with the tarsi slender and compressed; three toes before and one behind, with a rudimentary membrane along the toes, the posterior one joined interiorly to the tarsus.

XIII. *Palmipedes*—with short feet, more or less drawn up to the abdomen; anterior toes partly or wholly connected by a membrane.

The following table contains a list of the Birds of Vermont, arranged in the order in which they are described in the subsequent pages.

BIRDS OF VERMONT.

ORDER RAPACES—*Birds of Prey.*

<i>Falco leucocephalus</i> ,	Bald Eagle.
" <i>chrysaetos</i> ,	Golden Eagle.
" <i>haliaetus</i> ,	Fish Hawk.
" <i>lineatus</i> ,	Red-should'd Hawk.
" <i>pennsylvanicus</i>	Broad winged Hawk.
" <i>fuscus</i> ,	Slate colored Hawk.
" <i>peregrinus</i> ,	Large footed Hawk.
" <i>palumbarius</i> ,	Gos-Hawk.
" <i>Cooperi</i> ,	Cooper's Hawk.
" <i>cyaneus</i> ,	Marsh Hawk.
" <i>borealis</i> ,	Red-tailed Hawk.
" <i>columbarius</i> ,	Pigeon Hawk.
<i>Strix asio</i> ,	Screech Owl.
" <i>funerea</i> ,	Hawk Owl.
" <i>nyctea</i> ,	Snowy Owl.
" <i>virginiana</i> ,	Great-horned Owl.
" <i>cinerea</i> ,	Cinereous Owl.
" <i>brachyotus</i> ,	Short-eared Owl.
" <i>nebulosa</i> ,	Barred Owl.
" <i>acadica</i> ,	Saw-Whet.
" <i>americana</i> ,	Barn Owl.

ORDER OMNIVORES—*Food of all kinds.*

<i>Sturnus ludovicianus</i>	Meadow Lark.
<i>Icterus baltimore</i> ,	Baltimore Oriole.
" <i>phœnicus</i> ,	Red Winged Black Bird.
" <i>pecoris</i> ,	Cow Black Bird.
" <i>agripennis</i> .	Bob-o-link.
<i>Quiscalus versicolor</i> ,	Crow Black Bird.
" <i>ferrugineus</i> ,	Rusty Black Bird.
<i>Corvus americanus</i> ,	Common Crow.
" <i>corax</i> ,	Raven.
" <i>cristatus</i> ,	Blue Jay.
" <i>canadensis</i> ,	Canada Jay.
<i>Parus atricapillus</i> ,	Chicadee.
" <i>hudsonicus</i> ,	Hudson Bay Titmouse.
<i>Bombycilla carolinensis</i> ,	Cedar Bird.

ORDER INSECTIVORES—*Living on Insects.*

<i>Lanius borealis</i> ,	Butcher Bird.
<i>Muscicapa tyrannis</i> ,	King Bird.
" <i>fusca</i> ,	Phæbec.
" <i>virens</i> ,	Wood Pewee.
" <i>acadica</i> ,	Small Pewee.
" <i>canadensis</i> .	Spotted Flycatcher.
<i>Vireo flarifrons</i> ,	Yellow throated Vireo.
" <i>noteborucensis</i>	White eyed Vireo.
" <i>olivaceus</i> ,	Red eyed Vireo.
" <i>solitarius</i> ,	Solitary Vireo.

CATALOGUE OF BIRDS.

ORDERS, GENERA AND SPECIES.

<i>Turdus rufus</i> ,	Brown Thrush.
" <i>felivox</i> ,	Cat Bird.
" <i>migratorius</i> ,	Robin.
" <i>Wilsonii</i> ,	Wilson's Thrush,
" <i>novboracensis</i>	New York Thrush.
" <i>aurocapillus</i> ,	Golden crowned do.
" <i>solitarius</i> ,	Hermit Thrush,
<i>Sylvia coronata</i> ,	Yellow crowned Warbler
" <i>petechia</i> ,	Yellow red poll do.
" <i>æstiva</i> ,	Summer Warbler.
" <i>maculosa</i> ,	Spotted Warbler.
" <i>rubricapilla</i> ,	Nashville Warbler.
" <i>virens</i> ,	Black throated Green do.
" <i>pinus</i> ,	Pine Creeping do.
" <i>cærulea</i> ,	Cærulean Warbler,
" <i>Blackburnia</i> ,	Blackburn's Warbler
" <i>icterocephala</i> ,	Chestnut sided do.
" <i>canadensis</i> ,	Black throated do.
" <i>trichas</i> ,	Maryland yellow throat.
" <i>vermivora</i> ,	Worm eating Warb'r
" <i>varia</i> ,	Black & White Creeper.
<i>Regulus calendulus</i> ,	Ruby crowned Wren
" <i>tricolor</i> ,	Fiery crowned Wren
<i>Troglodytes ædon</i> ,	House Wren.
" <i>hyemalis</i> ,	Winter Wren.
" <i>americanus</i> ,	Wood Wren.
<i>Sialia Wilsonii</i> ,	Blue Bird.
<i>Anthos spinoletta</i> ,	Brown Lark.

ORDER GRANIVORES—Living on Seeds.

<i>Emberiza nivalis</i> ,	Snow Bunting.
" <i>graminea</i> ,	Bay winged Bunting
" <i>savanna</i> ,	Savannah Bunting.
<i>Fringilla melodia</i> ,	Song Sparrow.
" <i>hyemalis</i> ,	Snow Bird.
" <i>canadensis</i> ,	Tree Sparrow,
" <i>socialis</i> ,	Chipping Sparrow.
" <i>juncorum</i> ,	Field Sparrow.
" <i>palustris</i> ,	Swamp Sparrow.
" <i>tristis</i> ,	Gold Finch.
" <i>linaria</i> ,	Pine Linnet.
" <i>iliaca</i> ,	Ferruginous Finch.
" <i>pennsylvanica</i>	White throat. Finch.
" <i>leucophrys</i> ,	White crown. Finch.
" <i>arctica</i> ,	Arctic ground Finch.
" <i>erythrophthalma</i>	Towhe-ground Finch
" <i>purpurea</i> ,	Purple Linnet.
<i>Pyrrhula enucleator</i> ,	Pine Grosbeak.
<i>Loxia curvirostra</i> ,	Common Cross bill.
" <i>leucoptera</i> .	White Winged do.

ORDER ZYGODACTYLI—The toes in pairs.

<i>Coccyzus americanus</i>	Yellow bill Cuckoo.
" <i>dominicus</i> .	Black billed Cuckoo.
<i>Picus auratus</i> ,	Gold wing. Woodpecker.
" <i>erythrocephalus</i> ,	Red headed do.
" <i>varius</i> ,	Yellow bellied do.
" <i>villosus</i> ,	Hairy Woodpecker.
" <i>pubescens</i> ,	Downy Woodpecker
" <i>arcticus</i> ,	Arctic three toed do.

ORDER TENUIROSTRES—Slender bill Birds.

<i>Sitta carolinensis</i> ,	White breast. Nuthatch.
" <i>canadensis</i> .	Red bellied Nuthatch
<i>Certhia familiaris</i> ,	Brown Creeper.
<i>Trochilus colubris</i> ,	Ruby throat Hum'g Bird.

ORDER ALCYONES.—Halcyons.

<i>Alcedo alcyon</i> ,	Belted King Fisher.
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ORDER CHELIDONES—The Swallow Tribe.

<i>Hirundo purpurea</i> ,	Purple Martin.
" <i>rufa</i> ,	Barn Swallow.
" <i>fulva</i> ,	Cliff Swallow.
" <i>bicolor</i> ,	White bellied Swal.
" <i>riparia</i> ,	Bank Swallow.
<i>Cypselus pelagius</i> ,	Chimney Swallow.
<i>Caprimulgus vociferus</i> ,	Whip-poor-Will.
" <i>virginianus</i> ,	Night Hawk.

ORDER COLUMBÆ—The Pigeon Tribe.

<i>Columba migratoria</i> ,	Passenger Pigeon.
" <i>carolinensis</i> ,	Carolina Dove.

ORDER GALLINÆ—Gallinaceous Birds.

<i>Meleagris gallopavo</i>	Wild Turkey.
<i>Perdix virginianus</i> ,	Quail.
<i>Tetrao umbellus</i> ,	Partridge.
" <i>canadensis</i> ,	Spruce Partridge.

ORDER GRALLATORES—Wading Birds.

<i>Calidris arenaria</i> ,	Sanderling Plover.
<i>Fulica americana</i> ,	Common Coot.
<i>Grus americana</i> ,	Whooping Crane.
<i>Ardea nycticorax</i> ,	Night Heron.
" <i>Herodias</i> ,	Great Blue Heron.
" <i>virescens</i> ,	Green Heron.
<i>Totanus Bartramius</i>	Upland Plover.
" <i>chloropigius</i> ,	Solitary Tatler.
" <i>macularius</i> ,	Spotted Tatler.
<i>Scolopax Wilsonii</i> ,	Common Snipe.
<i>Rusticola minor</i> ,	Woodcock.

ORDER PINNATIPEDES—Lobe-footed Birds.

<i>Podiceps carolinensis</i> ,	Pied-bill Dobchick.
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ORDER PALMIPEDES—Web-footed Birds.

<i>Larus Bonapartii</i> ,	Bonapartian Gull.
" <i>atricilla</i> ,	Black headed Gull.
<i>Anser canadensis</i> ,	Canadian Goose.
<i>Anas sponsa</i> ,	Wood Duck.
" <i>boschas</i> ,	Mallard.
" <i>obscura</i> ,	Dusky Duck.
" <i>discors</i> ,	Blue winged Teal.
<i>Mergus merganser</i> ,	Goosander.
<i>Colymbus glacialis</i> ,	Loon.

BIRDS OF PREY.

Birds of this order are distinguished by their hooked bills and powerful claws. They pursue and destroy other birds and small quadrupeds; and they are among birds what the carnivora are among quadrupeds.

GENUS FALCO.—Linn. and Tem.

Generic Character.—The head covered with feathers; the bill hooked, commonly curved from the base; cere colored and more or less hairy at the base; the lower mandible obliquely rounded, and both sometimes notched; the nostrils lateral, rounded, or ovoid, situated in the cere

THE BALD EAGLE.

THE GOLDEN EAGLE.

and open; tarsus clothed with feathers or scaly; the toes, three before and one behind—the exterior toe commonly united to the adjacent one by a membrane; nails sharp, strongly hooked, movable and retractile, tail feathers, twelve.

This Genus embraces the Eagles, Falcons, Hawks, Kites and Buzzards, and is divided by modern Ornithologists into no less than ten genera; but we deem it unnecessary to give the distinctive characters of these genera in this work.



THE BALD EAGLE.

Falco leucocephalus.—LINNÆUS.

DESCRIPTION.—Color of the body and wings deep lively brown or chocolate; head, upper part of the neck, tail and tail coverts clear white; bill, cere and feet yellow, with the soles of the feet rough and warty; iris light yellow. Length of the female 3 feet, spread of the wings 7 feet; male 2 or 3 inches shorter. The white of the head and tail is not clear till the third year, being previously blended with grayish brown.

HISTORY.—The Bald Eagle is found in the northern parts of both continents, but is much more common on the western than on the eastern continent. It is found in all parts of the United States, and is frequently seen in Vermont, but is not known to breed within the state. This Eagle is the adopted emblem of our country, but we should hesitate to acknowledge him to be the true representative of our national character. He has the reputation of being a free-booter, living by robbing the fish hawk of his honest gains. For this purpose he takes his stand upon some lofty tree growing near the shore, and when he sees the fish hawk rise from the water with his prey, he commences the pursuit, and the fish hawk, in order to effect his own escape, is compelled to abandon the fruit of his labor, which is immediately secured by

the eagle and borne away to his nest. When this eagle cannot procure a sufficient supply of fish, which is its favorite food, it preys upon other birds, and small quadrupeds and reptiles. The nest of the Bald Eagle is built in the top of some lofty tree. It is constructed of sticks lined with coarse grass. The eggs, according to Audubon, are from two to four, and are of a dull white color. They are usually hatched in May, and require the aid of the parents in procuring food till September.

THE GOLDEN EAGLE.

Falco chrysaetos.—LINN.

DESCRIPTION.—Bill bluish gray at the base, black at the tip; cere yellow; eyebrows light blue; iris chestnut; fore part of the head, cheeks, throat and under parts, deep brown; hind head, posterior and lateral parts of the neck light brownish yellow, the shafts and concealed parts of the feathers deep brown. The back deep brown, glossy, with purplish reflections; wing coverts lighter; primary quills brownish black; the secondaries, with their coverts brown, those next the body more or less mottled with brownish white, excepting at the ends; edges of the wings at the flexure pale yellowish brown. Tail dark brown, lighter towards the base, with a few irregular whitish markings; tail long, slightly rounded. Wings long; 4th quill longest, and the 6 first abruptly cut out on the inner webs. Length 38 inches, spread of the wings 7 feet; bill along the back 2½ inches; edge of lower mandible 2½; tarsus 4½; middle toe and claw 4½; hind claw 2½. Extremities of the folded wings 1 inch short of that of the tail.—Audubon.

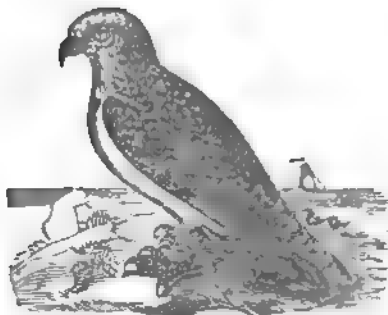
HISTORY.—The Golden Eagle, though rare, is occasionally seen in Vermont and has sometimes been known to build its nest and rear its young within the state. The nest is placed upon the inaccessible shelf of some rugged precipice, and consists of a few sticks and weeds barely sufficient to keep the eggs from rolling down the rocks. The eggs are two or three in number, 3½ inches long, of a dull white color with undefined patches of brown. These eagles feed upon young fawns, hares, raccoons, wild turkeys, partridges and other quadrupeds and birds, but will feed on putrid flesh, only when severely pressed by hunger.

The following description is drawn from a specimen preserved in the museum of the College of Natural History of the University of Vermont.

THE FISH HAWK.

DESCRIPTION.—General color grayish chocolate brown resulting from the feathers being dark chocolate edged with brownish ash; feathers white at the base, which makes it appear spotted with white when the feathers are disturbed; tail with irregular whitish marks towards the base. Bill clear blue-black; upper mandible obtusely toothed; tarsus roundish, two thirds feathered; feet strong, toes rasp-like on the underside. Length from the point of the bill to the end of the tail 3 feet 7 inches, folded wing 26 inches; tail beyond the folded wings 6.5 inches; from the tip of the upper mandible along the curve to the cere 2.5, width of the cere .9, under mandible 2.9, depth of the upper bill 1.2, middle toe without the nail 2.5 inches.

This eagle was killed several years ago near Burlington. It was discovered sitting upon the beach apparently asleep, and in that condition it was approached and killed with an ear. It would appear from the partially feathered tarsus to belong to the family of sea eagles, and I was at first disposed to consider it the young of the Bald Eagle, but by measuring I found it to be larger than the adult of that species. Though it differs somewhat in color, it resembles Audubon's figure of the Washington Eagle more nearly than any other.



THE FISH HAWK.

Falco haliastur.—SAY.

DESCRIPTION.—General color of the upper parts dusky brown, tail barred with pale brown. The upper part of the head and neck white, the middle part of the crown dark brown. A broad band of brown from the bill down each side of the neck; upper parts of the neck streaked with brown; under parts whitish; anterior tarsal feathers tinged with brown. Bill brownish black, blue at the base and margin; cere light blue; iris yellow; feet pale greenish blue tinged with brown; claws black. Length 23 inches; spread of the wings 54; bill, along the back, 2; tarsus 2½; middle toe 3.—Audubon.

HISTORY.—The Fish Hawk is quite common during the summer along the

THE RED-SHOULDERED HAWK.

whole coast of the United States and is also seen along the lakes and rivers in the interior. It usually arrives in New England about the first of April and departs to the south again in the fall. According to Audubon some of them winter about New-Orleans. This hawk subsists, as its name would imply, principally upon fish, which it takes by hovering over the water and plunging upon them as they rise near the surface and then bears them off in its talons. They sometimes catch fishes in this way weighing four or five pounds. They breed all along the coast of the middle states. Their nest is usually placed in the top of a large tree near the shore and is of great size, sometimes measuring four feet in diameter and the same in height. It is composed of sticks intermingled and lined with sea weed and grass. The eggs are 3 or 4 in number, of an oval form, yellowish white color and spotted with reddish brown. The arrival of the Fish Hawk along the sea coast in the spring is hailed with joy by the fishermen, who regard it as the harbinger of the arrival of shoals of fishes.



THE RED-SHOULDERED HAWK.

Falco Lineatus.—Gmel.

DESCRIPTION.—Color of the head, neck and back, yellowish brown, resulting from the feathers being dark brown, edged with ferruginous; wings, and wing coverts spotted and tipped with white; tail dark brown, tipped with white, crossed by four narrow grayish white bars. Breast and belly bright ferruginous, with a black line along the shafts of the feathers, and spots of yellowish white. Vent, femorals, and under tail coverts, of a light ochrey tint, with some of the feathers spotted with brown, and the outer femorals long and barred with ferruginous. Legs and feet bright yellow; bill and claws dark horn color. Length of the specimen before me, 19 inches; folded wing 13, reaching be-

THE BROAD-WINGED HAWK.

yond the third white bar on the tail ; tail 8, reaching $2\frac{1}{2}$ beyond the folded wings.

HISTORY.—In Vermont this hawk passes, with several other species, under the general name of Hen Hawk, but is sometimes distinguished as the Red Hen Hawk. It confines itself more to the woods than several other species, where it may be seen flying among the trees, or sitting upon a limb watching for the appearance of a squirrel, or some other small animal, upon which he may make a repast. This hawk breeds in Vermont. Its nest is about the size of the crow's nest. It is placed in the forked branch of a high tree, made of sticks, lined with moss. Its eggs, usually four or five in number, are laid in April. They are of a broad, oval form, granular on the outside, and of a light blue color, spotted towards the small end with reddish brown. Whenever their nests are approached, they manifest much uneasiness, and their *Keé-oo* becomes very loud and angry.

THE BROAD-WINGED HAWK.

Falco pennsylvanicus.—WILSON.

DESCRIPTION.—General color of the head, back and wings above brown, tinged with buff on the neck ; wings very faintly barred with black ; tail short with three brownish white bars, and narrowly terminated with the same. Breast brownish buff spotted with white ; belly, sides and femorals, white with the feathers thickly marked with large hastate spots of yellowish brown ; vent and under tail coverts white with a few spots. A brown stripe from the mouth towards the throat ; bill bluish black, nostrils oval, head large and flattened above ; cere and legs yellow ; legs short and strong ; tarsus shielded with parallel scales ; anterior outer toes slightly connected ; space between the nostril and eye bristly ; wings broad, the fourth quill longest ; the three first abruptly notched on their inner webs. Length of the specimen before me, which is a female, 15 inches ; spread of the wings 33 $\frac{1}{2}$.

HISTORY.—This hawk bears a considerable resemblance to the preceding ; it is, however, though smaller, proportionally more thick and robust, less ferruginous, has a shorter tail, and is without the white marking on the exterior of the wings. The Broad-winged Hawk breeds in Vermont, and the specimen from which the above description was made, was shot, while building her nest, in Burlington, in April, 1840. Within her were found five

THE SLATE-COLORED HAWK.

eggs in different stages of enlargement, one of which appeared to be fully grown with shell quite hard and in a condition to be deposited in the nest. Its color was light sky-blue finely specked with brown towards one end, with a smooth surface. The nest of this hawk is about the size of the crow's, built in the top of a tree with sticks, and lined with grass, roots and moss.

THE SLATE-COLORED HAWK.

Falco fuscus.—GMELIN.

DESCRIPTION.—Form slender ; general color above reddish slate, the feathers being brown slate slightly edged with rufous ; scapulars and upper tail coverts with large concealed white spots ; wings obscurely barred with dark and light brown ; tail with alternate bars of blackish brown and dark ash, five of each, the terminal bar being ash edged with white ; chin, throat and belly yellowish white, with a line or brown stripe along the shafts of the feathers on the chin and throat, and large tear shaped reddish brown spots on the belly ; thighs reddish, lighter on the outside, with large hastate spots on the outside, making them appear barred ; under tail coverts pure white ; bars on the under side of the wings and tail distinct ; legs and feet yellow ; claws black ; bill bluish black ; cere greenish yellow ; iris bright yellow. Length of each of two specimens before me 13.4 inches, spread of the wings 24 inches, folded wing 8, tail 6.2, reaching 3.5 beyond the folded wings, tarsus 2.5, bill along the ridge .6 ; along the gap .8.

HISTORY.—This hawk is very common in Vermont, and generally passes under the name of Pigeon Hawk. It is usually seen in our fields and pastures, flying very swiftly near the surface of the ground in search of its prey, which consists of small birds, mice and reptiles. It sometimes approaches our dwellings and carries off young chickens. This species is very widely diffused over our country, being found, according to Audubon, as far south as Texas, and according to Richardson as far north as lat. 51°. The nest of this hawk is built sometimes in rocky cliffs and sometimes on trees. The eggs are usually four or five in number, rounded at both ends, of a livid white color, blotched with chocolate. This is the Sharp-shinned Hawk, figured and described by Audubon in his *Birds of America*, I—100, plate 25.

THE LARGE-FOOTED HAWK. THE GOS-HAWK.—COOPER'S HAWK. THE MARSH HAWK.

THE LARGE-FOOTED HAWK.

Falco peregrinus.—GMEI.

DESCRIPTION.—Head and hind neck grayish black, tinged with blue; the rest of the upper parts dark bluish gray, indistinctly barred with deep brown. Quills blackish brown, with elliptical reddish white spots on their inner webs. Tail grayish brown, marked with about twelve bars. Throat and fore neck white; a broad band of blackish blue from the angle of the mouth downwards; sides, breast and thighs reddish white, transversely marked with dark brown spots in a longitudinal series; under wing feathers whitish, transversely barred. Bill blackish blue at the tip, pale green at the base; cere oil green; bare orbital space orange; iris hazel; feet lemon yellow; claws brownish black. Length 16½ in.; spread of the wings 30 inches.—*Audubon*.

HISTORY.—This hawk is common to both the eastern and western continents. It is found in most parts of the United States, and, according to Audubon, has, within a few years, become much more common than formerly. I am not sure that any of this species have been taken in Vermont, but, from their being common in neighboring states, the probability of their existence here is so strong that I have thought it best to place it in my list. According to Nuttall it builds its nest in the most inaccessible clefts of rocks, and lays 3 or 4 eggs, which are of a reddish yellow color, spotted with brown.

THE GOS HAWK.

Falco palumbarius.—LINN.

DESCRIPTION.—Adult male, dark bluish gray above; the tail with four broad bands of blackish brown; the upper part of the head grayish black; a white band, with black lines, over the eyes; lower parts white, narrowly barred with gray, and longitudinally streaked with dark brown. *Young*, brown above; the feathers edged with reddish white; the head and hind neck pale red, streaked with blackish brown; the lower parts yellowish white, with oblong longitudinal dark brown spots. Length 24 inches; spread of the wings 47.—*Audubon*.

HISTORY.—This hawk is rare in Vermont, but is sometimes met with in the northern part of the state. The Gos-Hawk in Europe is sometimes trained for falconry. Its disposition is very savage, and it is withal so much of a cannibal as sometimes to devour its own young.

Their ordinary food consists of young hares, squirrels, young geese, partridges, pigeons, and other smaller birds and quadrupeds. It builds its nest in the manner of the crow, in the central part of the top of a high tree. Its eggs, usually 3 or 4, are of a bluish white, marked and spotted with brown.

COOPER'S HAWK.

Falco Cooperi.—BONAP.

DESCRIPTION.—Tail rounded; tarsi moderately stout. Adult *male*, dull bluish gray above; the tail with four broad bands of blackish brown, and tipped with white; upper part of the head grayish black; lower parts transversely barred with light red and white; the throat white, longitudinally streaked. *Female* similar, with the bands on the breast broader. *Young*, umber brown above, more or less spotted with white; the tail with four blackish brown bars; lower parts white; each feather with a longitudinal, narrow, oblong brown spot. Length, male 20 in., female 22,—spread 36, 38.—*Aud.* Legs and feet yellow; cere greenish yellow; iris bright yellow. Tail reaches 5 inches beyond the folded wing.—*Nuttall*.

HISTORY.—This is quite a common hawk in Vermont, and, with several others, passes under the general name of Hen Hawk. Nor is the name in this case inappropriate, since this hawk, more frequently perhaps than any other, bears off hens and chickens from the farm yard. This hawk breeds in this state, and its nest, according to Audubon, is usually placed in the forks of the branch of an oak, towards the top, and resembles that of the crow, being composed of crooked sticks, lined with grass and a few feathers. But that they do not build upon trees exclusively appears from the fact that a nest of this hawk, containing two eggs, was found, a few years ago, by George H. Peck, Esq., built upon the ground, in Burlington. The eggs are usually 3 or 4, almost globular, large for the size of the bird, of a dull, white color, strongly granulated and rough.

THE MARSH HAWK.

Falco cyaneus.—LINN.

DESCRIPTION.—Color of the *male* bluish gray; quill feathers white at their origin, and black towards the extremities; internal base of the wings, rump, belly, sides, thighs, and beneath the tail, white, without spots; upper part of the tail cinereous gray, with ends of the feathers whi-

THE RED-TAILED HAWK.

tish. Iris and feet yellow. *Female*, dirty brown above, with the feathers bordered with rusty; beneath rusty yellow, with large longitudinal brown spots; quills banded exteriorly with dark brown and black; interiorly with black and white; rump white, with rusty spots; two middle tail feathers banded with blackish and dark gray; lateral feathers banded with yellowish red and blackish. Length 22 inches. Male 1 or 2 inches less. *Young* very similar to the female.—*Nuttall*.

HISTORY.—This very common species of hawk is also known by the name of Hen Hawk and Hen Harrier. It is very widely diffused, being found in Europe, Africa, North and South America, and the West Indies. This hawk builds its nest upon the ground in swampy woods, or in marshes covered with sedge or reeds. It selects a spot a little elevated above the surrounding marsh, and the nest is compactly built of dry reeds and grass. The eggs are usually four, bluish white, and sometimes sprinkled and marked with pale reddish brown. This hawk feeds upon partridges, plovers, and smaller birds, and also upon lizards, frogs, and snakes.

THE RED-TAILED HAWK.

Falco borealis.—GMEI.

DESCRIPTION.—General color dusky brown tinged with ferruginous above, beneath whitish with dark hastate spots; wings dusky, barred with blackish; tail rounded, extending 2 inches beyond the wings, of a bright brown or brick color, with a single band of black near the end and tipped with brownish white. Chin white, bill grayish black; iris, cere, sides of the mouth and legs yellow, breast somewhat rust colored; vent and femorals pale ochreous, the latter with a few heart shaped spots of brown. Length 20 to 22 inches, spread of the wings 45 inches.—*Nuttall*.

HISTORY.—The Red Tailed Hawk, according to Audubon, is a constant resident in all parts of the United States. This hawk feeds upon young hares and other small quadrupeds and birds. He is so strong and powerful as to be able to overcome and bear off doves, goslings and dunghill fowls, and his depredations upon the farmer's poultry yard are by no means of rare occurrence. And yet he is so shy and wary, that it is extremely difficult to approach near enough to shoot him with a gun, of the use of which he, like the crow, seems to have an intuitive knowledge. The best method of getting a shot at these wary birds in open land is to approach them on horseback. The Red-

Tailed Hawk breeds in Vermont. Its nest is built in the fork of a lofty tree, and is composed of sticks, twigs, coarse grass and moss. The eggs are 4 or 5, of a dull white color, blotched with brown and black.

THE PIGEON HAWK.

Falco columbarius, LINN.

DESCRIPTION.—Whole upper parts of a deep dusky brown except the tail which is crossed by five narrow whitish bars; beneath yellowish or reddish white, spotted and streaked with brown. The bill is of a light bluish gray, tipped with black; cere and skin round the eye greenish; iris deep hazel; legs yellow; claws black; feathers on the thighs remarkably long. *Female* with the cere and legs greenish yellow; upper parts dark grayish brown; the lower pale and spotted as in the male. *Young* with the head reddish brown, streaked with dusky, in other respects resembling the female. Length of the male 11 inches, spread of the wings 23.—*Nutt. Aud.*

HISTORY.—The Pigeon Hawk is much less common than several other of the smaller species of hawk. Audubon informs us that this hawk breeds in Nova Scotia, New Brunswick and Labrador. The nests are usually placed upon the top of small firs with which those countries abound, at the height of 10 or 12 feet from the ground. They are built of sticks slightly lined with moss and feathers. The eggs are usually five, and are an inch and three quarters in length. Their ground color is a dull yellowish brown, thickly clouded with irregular blotches of dull dark reddish brown. This hawk is shy and watchful, seldom being seen out of the forests. It feeds upon small birds, mice and reptiles.

GENUS STRIX.

Generic Characters.—Beak compressed, bent from its origin; base surrounded by a cere, covered wholly, or in part, by stiff erect hairs; head large, much feathered; nostrils lateral, rounded, open, pierced in the anterior margin of the cere, concealed by hairs directed forwards; eyes very large; orbits surrounded by feathers; legs and feet feathered, frequently to the very claws; feet with three toes before and one behind, separate; the exterior reversible; first quills denuded on their anterior border, the third longest.

This Genus embraces the Owl Family, and is now divided by naturalists into no less than six genera. The owls are called nocturnal birds of prey, because they seek their prey chiefly by night. The pupil of the Owl's eye is so large

THE SCREECH OWL.

THE HAWK OWL.

THE SNOWY OWL.

and admits so many rays of light that they are dazzled, and unable to see by the full light of day, but by faint twilight and by moonlight they appear to see clearly. Several of the species are furnished with ear-like tufts, and are called *horned owls*.



THE SCREECH OWL.

Strix asio.—Linn.

Bute asio.—Aud. Birds Am. I—147, pl. 40.

DESCRIPTION.—Upper parts pale brown, spotted and dotted with brownish black; a pale gray line from the base of the upper mandible over each eye; quills light brownish gray, barred with brownish black; their coverts dark brown; secondary coverts with the tips white, throat yellowish gray, lower parts light gray, patched and sprinkled with brownish black; tail feathers tinged with red. *Young*, with upper parts light brownish red; each feather with a central blackish brown line; tail and quills barred with dull brown; a line over the eye and the tips of the secondary coverts reddish white; breast and sides light yellowish gray, spotted and lined with brownish black and bright reddish brown; the rest of the lower parts yellowish gray; the tarsal feathers pale yellowish red. Length 10 inches; spread 23.—*Aud.*

HISTORY.—This little owl is found in nearly all parts of the United States, but is much more common in northern than in southern sections. The Screech Owl is by no means rare in Vermont, and many a Green Mountain lad, as he has been passing through a wood in a dark night has felt his hair rise, his heart leap, and himself flying as upon wings of the wind, at the terrific scream of this bird, perched in a tree just over his head. Although more common in the fall and forepart of winter, many of them spend the summer and rear their young in this state. Their nest, which is made of grass and feathers, is placed at the bottom of a hollow tree or stub, often not more than 6 or 8 feet from the ground. The eggs are white, of a globular form, and usually 4 or 5 in number. Only one brood is raised in a season. The young become

fully feathered in August, when they appear as described above. This owl is often designated as the Little Screech Owl, and is also called the Mottled Owl.

THE HAWK OWL.

Strix funerea.—Gmelin.

Burns funerea.—Aud. Am. Birds, I—119, pl. 37.

DESCRIPTION.—Tail long, much rounded, the lateral feathers two inches shorter than the middle. Upper part of the head brownish-black, closely spotted with white; hind neck black, with two broad longitudinal bands of white spots; the rest of the upper part dark brown, spotted with white; tail with eight transverse bars of white, the feathers tipped with the same; facial disks grayish white, margined with black; lower parts transversely barred with brown and dull white.—*Aud.* Bill yellow; feet thickly feathered; nails horn-color.—*Nutt.* Length of the male 16 inches; spread of the wings 32; female larger.

HISTORY.—This species forms the connecting link between the hawks and the owls, having, in several respects, a considerable resemblance to both, and hence its name, *Hawk-Owl*. We are informed by Dr. Richardson that this owl is common throughout the fur countries from Hudson's bay to the Pacific ocean, and that it is more frequently shot than any other. It must, however, be a rare bird in the United States, generally, since the indefatigable Audubon confesses that he has never seen it alive. But it is because he has not visited the north part of our own state that he has been denied this pleasure; for he is assured by no less authority than Dr. Thomas M. Brewer, of Boston, that the Hawk-Owl is so common about Memphremagog lake in Vermont, that a dozen of them may be procured by a good gunner in a day, and that their nests, which are in hollow trees, are frequently met with. Its eggs, according to Richardson, are white, and usually two in number.

THE SNOWY OWL.

Strix nyctea.—Linnæus.

Burns nyctea.—Aud. Am. Birds, I—113, pl. 28.

DESCRIPTION.—General color white, more or less spotted and barred with brown; the tail rounded and extending a little beyond the folded wings; the second and fourth quills equal, the third longest; bill bluish black, curved from the base; upper mandible thickly studded with stiff, bristly white feathers; throat and legs covered with soft, pure white

THE GREAT HORNED OWL.

THE CINEREOUS OWL.

down, which becomes hairy upon the feet, and nearly conceals his long, black, and sharp claws. Length of the specimen before me 27 inches; spread of the wings 56 inches; longest quill 15 inches.

HISTORY.—The principal residence of this species of owls is in the northernmost parts of both the eastern and western continents. It is very common in Lapland, Iceland, and in the countries around Hudson's Bay, and its large size and thick downy plumage are well fitted to resist the climate of those icy regions. "In those dreary wilds, surrounded by almost perpetual winter, he dwells, breeds and obtains his subsistence. His white robe renders him scarcely discernible from the overwhelming snows where he reigns like the boreal spirit of the storm. His loud, hollow, barking growl, 'whowh' 'whowh', 'hah, hah, hah, and other more dismal cries, sound like the unearthly ban of the infernal Cerberus, and heard amidst a region of cheerless solitude, his lonely and terrific voice augments rather than relieves the horrors of the scene.'* The Snowy Owl seeks his food by day as well as by night, and in the midst of winter many of them are compelled to proceed to the southward to procure the means of subsistence. At such times they are seen, usually in pairs, in various parts of the U. States. They do not make their appearance in Vermont until winter is fully set in, and leave us with the earliest indications of spring. They breed in the regions far to the north, and are said to make their nest upon steep rocks, or old pine trees, and to lay two eggs, which are of a pure white. They feed upon other birds, mice, rats, and other small quadrupeds.

THE GREAT HORNED OWL.

Strix virginiana.—GMEI.

Bubo virginianus.—AUD. Am. Birds, I—143, pl. 39.

DESCRIPTION.—Bill black; iris bright yellow. Above whitish and ferruginous, thickly mottled with dusky; face ferruginous, bounded by a band of black. A whitish space between the bill and the eyes. Beneath marked with numerous transverse dusky bars on a yellow and white ground; vent paler. Feet covered with hair-like pale brown feathers; tail rounded and broad, reaching an inch beyond the wings, mottled with brown and tawny and crossed with 6 or 7 narrow bars of brown; chin whitish. Horns broad, 3 inches long, formed of 12 or 14 feathers, with black webs and edged with

brownish yellow. Length of the male 21 inches, female 2 inches longer.—Nutt.

HISTORY.—This is one of the largest species of American Owls, and is found through all the regions from the gulf of Mexico to Hudson's bay. It breeds in this state and in some of the unsettled woody parts is quite common. Its nest, which is large, is built of dry sticks and lined with leaves and some feathers. The eggs are from three to six in number, about the size of those of the common hen, but rounder and of a yellowish white color. This owl is often called the Cat Owl, from the resemblance of its face to that of the cat. It confines itself mostly to the retired and dark thickets of the forests, and particularly to thickets of spruce and other evergreens, and, in many places during the summer these owls may be heard responding to one another their *waugh ho! waugh ho! waugh hoo*—during the whole night. Their food consists of various kinds of birds, hares, squirrels and other quadrupeds, and they sometimes come around our barns, and carry off our domestic fowls. These owls are said sometimes to have pounced upon cats, mistaking them perhaps for rabbits, but finding themselves to have caught a Tartar, they are generally very willing to relinquish their grasp.

THE CINEREOUS OWL.

Strix cinerea.—GMEI.

Syrnium cinereum.—AUD. Am. Birds, I—130, pl. 35.

DESCRIPTION.—Upper parts grayish brown, variegated with grayish-white in irregular undulated markings; the feathers on the upper part of the head with two transverse white spots on each web; the smaller wing-coverts of a darker brown, and less mottled than the back; the outer scapulars with more white on their outer webs; primaries blackish-brown toward the end, in the rest of their extent marked with a few broad light-gray oblique bands, dotted and undulated with darker; tail similarly barred; ruff-feathers white towards the end, dark brown in the centre; disks on their inner sides gray, with black tips, in the rest of their extent grayish-white with 6 bars of blackish-brown irregularly disposed in a concentric manner; lower parts grayish-brown, variegated with grayish and yellowish white; feet barred with the same. Length 30½ inches; spread, 48.—Aud.

HISTORY.—This is the largest species of owl known in this country. It is only occasionally met with in the northern parts of the United States, but further north it is by no means a rare bird, being

* Nuttall.

THE SHORT-EARED OWL.

THE BARRED OWL.

THE SAW-WHET.

according to Dr. Richardson common in the woody districts between Hudson's Bay and the Pacific ocean, as far north as the 68° of latitude. Dr. R. found a nest of one of these owls on the 22d of May, containing three young. It was built of sticks on the top of a balsam poplar, and was lined with feathers. The eggs are said to be spotted. This owl is rarely seen in this state, but occasionally makes his appearance here in the depth of winter.

THE SHORT-EARED OWL.

Strix brachyota.—LATHAM.

Otus brachyotus.—Aud. Am. Birds I—140, pl. 38.

DESCRIPTION.—Ear-like tufts inconspicuous, consisting of 2 or 3 short feathers; general color ochreous spotted with blackish-brown; face round, the eyes blackish; tail ochreous with about 5 brown bands, not extending beyond the wings, and tipped with white; beneath yellow with longitudinal spots of blackish-brown; iris bright yellow; bill black; feet and toes feathered. *Females* with the general tints paler. Length from 13 to 15 inches.—Nutt.

HISTORY.—This species migrate to the south in the fall, and during the winter are so numerous in Florida that Audubon says that he has shot no less than seven of them in a single morning. They proceed to the north on the approach of spring for the purpose of rearing their young, but some of them are known to spend the summer, and, occasionally, to breed as far south as Pennsylvania. This owl is found in Vermont, and I am assured by Dr. Brewer that it breeds in the northeastern part of the state. It builds its nest upon the ground, and its eggs, which are about four, are of a dull bluish white color. The short-eared owl is attracted by nocturnal fires, and will sometimes approach so near as to be knocked down with a stick.

THE BARRED OWL.

Strix nebulosa.—LINNÆUS.

DESCRIPTION.—General color umber-brown, spotted and barred with white and yellowish white above; beneath whitish, barred transversely on the breast and longitudinally on the belly with umber brown, and having large sagittate spots of the same on the feathers towards the tail; tail long, reaching 4 inches beyond the folded wings, rounded, tipped with white, convex above, and crossed by six broad bars of umber brown, separated by narrow bars of yellowish white; plumage in front

of the eye ends in long black hairs; bill yellow; legs covered with feathers, extremities of the toes covered with scales; nails long, sharp, and of a dark horn color. Length 20 inches.

HISTORY.—The Barred Owl inhabits both the eastern and western continents. It is found in all parts of the United States, and is one of the most common owls found in Vermont. It does not confine itself to the woods, but comes around our dwellings and is often seen among our shade trees and orchards in the midst of our villages. I have before me two specimens, both of which were shot in the village of Burlington. Their food consists of young hares, squirrels, mice, grouse and other birds, and also of frogs and other reptiles. They sometimes destroy chickens. This owl, according to Audubon, does not build a nest, but lays its eggs, in the latter part of March, upon the soft rotten wood in a hollow tree, and sometimes in the old nest of a crow or red-tail hawk. The eggs are of a globular form, pure white, with a smooth shell and from 4 to 6 in number.

THE SAW-WHET.

Strix acadica.—GMEL.

Uta acadica.—Aud. Am. Birds, I—123, pl. 33.

DESCRIPTION.—General color above olivaceous brown, scapulars and some of the wing-coverts spotted with white; the first six primary quills obliquely barred with white; tail darker, with two narrow white bars; upper part of the head streaked with grayish-white; ruff white, spotted with dusky. Lower parts whitish; the sides and breast marked with broad elongated patches of brownish-red. Length of the male 7½ inches, spread 17. Female 8½, 18.—Audubon.

HISTORY.—This little owl is not uncommon in Vermont, and it is generally known by the name of *Saw-Whet*; and this name is derived from the sound of its peculiar note, which resembles that of the filing of the teeth of a large saw. People, who are unacquainted with this bird, travelling in the forest, are often deceived by its note, supposing themselves to be approaching a saw-mill, while far remote from any settlement. Audubon relates that he himself was several times deceived in this way. This bird is sometimes called the *Little Owl*, or 'Little Acadian Owl.' It is retired and solitary in its habits, confining itself during the day to evergreen and other thickets of the forest. For rearing its young, the Saw-Whet takes possession of the old nest of a crow, or some other large bird,

THE BARN OWL.

or of a hollow cavity of an old tree. The eggs are of a form approaching to globular, are of a glossy-white color, and are from three to six in number. This owl feeds upon mice, beetles, moths and grasshoppers.

THE BARN OWL.

Strix americana.—AUDUBON.

DESCRIPTION.—Bill pale grayish yellow; claws and scales brownish yellow. General color of the upper parts grayish brown, with light yellowish-red interspersed, produced by very minute mottling, each feather having towards the end a central streak of deep brown terminated by a small oblong grayish-white spot; wings similarly colored; secondary coverts and outer edges of primary coverts with a large proportion of light brownish-red, fading anteriorly into white, each feather having a small dark brown spot at the tip. Length and spread, male 17, 42; female 18, 46.—*Audubon*.

HISTORY.—This owl, though very common in the southern states, is so rare at the north-east, that Audubon says that he has never seen it to the eastward of Pennsylvania, and yet I am assured by Dr. Brewer that it is not only found in Vermont, but breeds here. This owl is entirely nocturnal in its habits, and when disturbed in the day time flies about in a irregular, bewildered manner. Audubon supposes its food to consist entirely of small quadrupeds. This owl is said to bear a close resemblance to the *Strix flammea*, or White Barn Owl.

OMNIVOROUS BIRDS.

These have the bill robust, medium-sized, and sharp on the edges; upper mandible more or less convex, and notched at the point; feet with four toes, three before and one behind; wings of medium length; quill feathers terminating in a point. They live, for the most part, in companies or flocks and are monogamous. The greater part of them build their nests on trees, but some of the species occupy the crannies of old walls, and some build upon the ground. Their principal food consists of insects, worms and carrion, to which they often add grain and fruit.

GENUS STURNUS.—*Linnaeus*.

Generic Characters.—The bill in the form of a lengthened cone, depressed and somewhat blunt, with the edges vertical; above somewhat rounded. Nostrils partly closed by an arched membrane. The tongue narrowed, sharp, and cleft at the point; the hind nail longest and largest; the first quill short, the second and third longest.



THE MEADOW LARK.

Sturnus ludovicianus.—*Linnaeus*.

DESCRIPTION.—The color above is variegated with black, bright bay and ochreous; beneath and a line over the eye bright yellow, a black crescent on the breast; tail wedge-form, feathers pointed, and the four outer ones nearly all white; bill brown above, bluish white beneath, conical with deep rounded sinuses at the base; legs and feet large, reddish white. The sexes differ but little in color, but in the young the yellow is much fainter. Length of the specimen before me 10 inches; folded wing, 5.

HISTORY.—The Meadow Lark is a harmless bird, and is common in all parts of the United States, and particularly so in Vermont, where it breeds in large numbers. Their residence is chiefly in meadows and old fields. They build their nest in some thick tuft of dry grass. It is usually constructed of the coarse grass, lined with finer blades of the same, and approached by the bird through a concealed covered way, and hence they are not readily found. The eggs are large and white, with a bluish tint, and marked with brownish spots. They are usually 4 or 5 in number. The food of the Meadow Lark consists of the larvae of various kinds of insects, worms, beetles and grass seeds; but it does not meddle with fruits and berries. It is of a shy, timid and retiring disposition, usually spending the whole summer in the moist meadows, and only retiring from them on the approach of winter.

GENUS ICTHYOPS.—*Brisson*.

Generic Characters.—Bill in the form of an elongated sharp pointed cone, somewhat compressed, rounded above, and rarely somewhat curved; with the margin inflected. Nostrils oval, covered by a membrane. Tongue sharp and cleft at the tip. Tarsus longer than the middle toe; inner toe but little shorter than the outer, and nearly equal to the hind one; middle toe longest; hind nail twice as large as the others. Wings sharp; first and second primary, but little shorter than the third and fourth, which are longest. The female very different from the male, and the young resemble the female.

THE BALTIMORE ORIOLE.

THE RED-WINGED BLACK-BIRD.



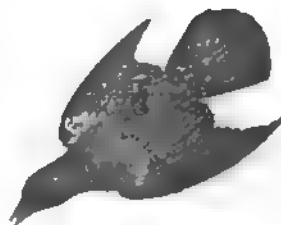
THE BALTIMORE ORIOLE.

Icterus Baltimore.—BONAPARTE.

DESCRIPTION.—Color of the shoulders, rump, lateral tail feathers, breast and belly bright orange; head, back, wings, middle tail feathers and chin black; wing feathers and coverts slightly edged with white on their outer webs; bill bluish horn color; legs, feet and nails brownish; iris hazel. In the female and young the orange is pale, and the parts which are black in the male are grayish; tail even; hind toe and nail strongest; bill very acute; 2d and 3d primaries equal and longest. Length of the specimen before me 7 inches; folded wing, 4½.

HISTORY.—The Baltimore Oriole, or *Golden Robin*, as he is here more commonly called, is one of our most gay and lively birds. It arrives in Vermont in the early part of May, and about the beginning of June may be seen busily engaged in the construction of its nest. For this purpose they usually select a flexible branch of a tree standing on the side of a gentle declivity. The nest is suspended from this by strings or threads in the form of a pendulous cylindrical pouch 5 or 6 inches in depth. The exterior is formed of strings, strips of bark and other fibrous substances, and the interior lined with grass, moss, wool, hair or downy substances. The eggs are usually 4 or 5 in number. They are white with a faint tinge of blue, and are usually marked at the large end with irregular brownish lines and spots. The period of incubation, according to Audubon, is 14 days, and the same pair frequently rear two broods in a season. Though shy and suspicious, they seem to prefer building their nests upon the high trees in the open land by the side of roads and about farm-houses. They feed their young principally with soft caterpillars, and the male and female both unite in this labor. The food of the old birds consists mostly of caterpillars and insects of different kinds. They are also fond of cherries, currants and straw-

berries, but do not often commit depredations upon these fruits in our gardens. They are thought to possess an extraordinary relish for green peas, as they sometimes attack those growing in our gardens. They split open the pod without detaching it from the vine, and, as is generally supposed, for the purpose of obtaining the young and tender peas. But Mr. Peabody informs us that it has been ascertained by Dr. Harris, that the Oriole opens the pods not for the sake of the peas, but for the grub of the pea-bug; and that instead of mischief, he is performing a service, for which he is more deserving of gratitude than reproach. Although we have several birds which occasionally do a little mischief in our fields and gardens, it is at least doubtful whether we have any which would not be found to be beneficial rather than otherwise, were their history fully known. From its manner of building, this bird is often called the *Hang Bird*, or *Hang Nest*.



THE RED-WINGED BLACK-BIRD.

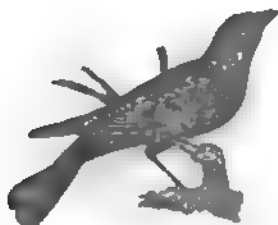
Icterus phœniceus.—DAUD.

DESCRIPTION.—Color of the male rich glossy black, with the exception of the lesser wing coverts, in which the lower row of feathers is of a buff orange color tipped with white, and the rest of a bright scarlet; legs, feet and bill glossy black, the latter an elongated, straight, sharp-pointed cone, slightly flattened in front; iris hazel; tail rounded, reaching 2 inches beyond the folded wings. Length of the specimen before me 9 inches, the folded wing 5 inches, spread of the wings 13½ inches. The female is considerably smaller than the male, and her general color dull reddish brown. The lesser wing coverts usually exhibit something of the reddish and orange hue, but seldom, if ever, is the bright scarlet observed in the female.

HISTORY.—This singularly marked bird usually arrives in Vermont early in April, and takes up its residence in flocks in the marshes and swamps. Here they commence building their nests about the mid-

THE COW BLACK-BIRD.

de of May. These are usually constructed in a thicket of alders, or other bushes, at the height only of a few feet from the ground, and are made of the leaves of flags, swamp-grass, &c., something in the form of that of the Golden Robin. The eggs, varying from 3 to 5 in number, are bluish white, with irregular faint purple markings on the larger end. About the beginning of September they begin to collect in flocks, and sometimes do considerable damage to the unripe corn. But it is believed that the advantage derived from these birds in the destruction of larvæ and insects in the spring of the year vastly more than compensates for all the damage they do. It is stated by Kalm, that after a great destruction of these and the common Black-Birds for the legal reward of 3d. per dozen, in 1748, the worms and grubs multiplied so exceedingly as to destroy a great part of the grass in New England.*



THE COW BLACK-BIRD.

Icterus pecoris — TEM.

DESCRIPTION.—Color glossy black with violet reflections from the back and breast; head and neck above and below dusky cinnamon brown; bill robust, conical, acute, slightly compressed towards the end, and of a glossy black color; upper mandible rounded and encroaching a little upon the forehead, sides of the lower mandible inflected; nostrils basal and partly covered; neck short, body robust; tarsus compressed, acute behind and covered anteriorly with seven longish scutella; toes free, lateral ones nearly equal, legs, feet, and claws brownish black. Tail rather short and slightly forked. Wings longish, curved, slightly rounded and the 2d and 3d quills longest. Length of the specimen before me 7 inches; folded wing 4½, spread of the wings 12, tail reaches 1 inch beyond the folded wing. Female less than the male, and of a dusky color.

HISTORY.—The Cow Black-Bird de-

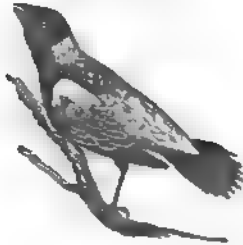
rives its name from its habit of being much among the cattle as they are feeding in the pastures. Its food consists almost entirely of insects, and it might be regarded as a public benefactor were it not for certain habits which render it detestable and prevent its receiving the credit to which its good qualities would otherwise entitle it. Being strangers to the joys which spring from conjugal fidelity and having a strong aversion to domestic cares, this bird contrives to escape them by laying its eggs in the nests of other birds. This it does in the absence of the owners of the nest, and when the owners return they usually manifest much uneasiness and make strong efforts to throw out the intruded egg. When they do not succeed in this, they often build a flooring over the strange egg and elevate the sides so as to form a new nest within the old. But in many cases circumstances will not allow them time for this labor, and then they are obliged patiently to submit to the imposition. The egg of the Cow-Bird is always hatched first, and the young by its superior size often smothers the lawful heirs. The proprietors of the nest, however, feed the foundling and treat it with the same kindness as if it were their own offspring.

A case of this intrusion of the Cow Black-Bird occurred in Burlington in 1840, in the garden of my friend R. G. Cole, Esq. Cashier of the Burlington Bank. He had noticed a pair of common yellow birds, *Fringilla tristis*, busily engaged for several days in building a nest upon one of his trees. A day or two after he had supposed it complete, he noticed that it had suddenly undergone a very considerable enlargement, so much so that his curiosity was excited, and upon examining it he found that it consisted of two nests, one within the other, and that the lower nest contained an egg of the Cow Black-Bird. The upper nest was entirely of cotton, and upon the circumstance being known, it was found that my friend Mr. S. E. Howard, whose yard is adjacent to the garden containing the nest, had observed two birds eagerly searching his premises for building materials, and that he had, with his accustomed liberality, purposely thrown out several handfuls of cotton, all of which disappeared in the course of a few hours, and were found neatly wrought into the nest above-mentioned.

The egg of the Cow Black-Bird is a little larger than that of the Blue bird, oval, whitish tinged with green and spotted with brown. Its notes are affected and unpleasant.

* Travels in North America, I.—378.

THE BOB-O-LINK.



THE BOB-O-LINK.

Icterus agripennis.—BONAP.

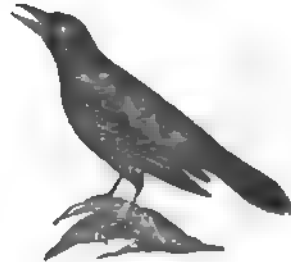
DESCRIPTION.—The spring dress of the male:—the top of the head, wings, tail, sides of the neck, and whole under plumage, black, with the feathers frequently skirted with brownish yellow; back of the head yellowish white; scapulars, rump, and tail coverts white, tinged with ash; extremities of the tail feathers similar to those of the woodpeckers; bill bluish black; legs dark brown. Color of the female, the young, and the male, in autumn and winter, varied with brownish black and brownish yellow above, dull yellow beneath. Length of the specimen before me 7 inches; spread of the wings 11½ inches.

HISTORY.—This is a common bird in the summer throughout the United States. In many parts it is called the *Rice Bird*, or *Rice Bunting*, from the circumstance of its feeding much upon wild rice. It is also sometimes called the *Skunk Black Bird*, from the resemblance of its black and white markings to those of the skunk. But *Bob-o-link* is its most common designation. This bird does not usually make its appearance in Vermont till the latter part of May, and the males are generally seen a few days earlier than the females. They take up their residence in the low meadows, and upon these and the neighboring ploughed fields they destroy vast numbers of insects and larvae; and this kind of food being abundant, they seldom leave it for the purpose of doing injury by feeding upon grain or fruits. Hence they are rather regarded as benefactors, and being of an animated, jovial turn, though somewhat boisterous, they are received on their return in the spring with a hearty welcome. The Bob-o-link builds its nest on the ground, among the grass. It is placed in a slight depression and constructed of grass, coarse on the outside and lined with that which is finer. The female lays from 4 to 6 eggs, which are of a dull yellowish white color, spotted with brown. About the last of July the males put off their black and white

nuptial dress, and assume the gray, unostentatious garb of the female and the young, and by the middle of August they begin to collect in flocks in the swamps and wet meadows, and soon after leave for a more southern climate.

GENUS QUISCALUS.—VIEILLÉ.

Generic Characters.—Bill bare, compressed from the base, entire, with sharp edges bent inwards; upper mandible forming an acute angle with the feathers of the head, curved from the middle, projecting beyond the lower, and provided with a long heel within. Nostrils oval, half closed by a membrane. Tongue cartilaginous, flattened, torn at the sides and cleft at the point. Tarsus a little longer than the middle toe; inner toe free, outer one united at the base to the middle one. Wings moderate in length; 1st primary equal to the 5th, and but little shorter than the 2d, 3d, and 4th, which are longest. Tail of 12 feathers, more or less rounded.



COMMON CROW BLACK-BIRD.

Quiscalus versicolor.—VIEILLÉ.

DESCRIPTION.—Color of the head, neck, and breast, deep violet, with greenish and purplish reflections; back, belly, and scapulars dark bronze color; wings and tail reflecting various shades of purple, with green blue and coppery tints. Bill and legs black. Upper mandible longer, but not so stout as the lower, and the keel within large. Feet and claws strong. Iris bright gamboge yellow. Tail of 12 feathers, rounded or wedge form, and reaching 3 inches beyond the folded wings. Length of the specimen before me 12 inches; tail 5½; folded wings 5.7; bill above 1.2, to the angle of the mouth 1.4. Length of the female usually 11 inches.

HISTORY.—The Crow Black Bird is an active and sociable bird, which warns us by his loud, clanking note, late in the spring, that he is once more in our fields and gardens, apparently unconscious that there can be any objection. He is one of those creatures concerning which it is difficult to say whether they are friends or foes; sometimes they are the one and

THE RUSTY BLACK-BIRD.

THE CROW.

sometimes the other, and it is only by striking a balance between the service and injury, that we can determine how to regard them. That he pulls up corn for the sake of the seed is undeniable; but it is also true that he devours immense numbers of insects, grubs and caterpillars. Perhaps it may be possible to secure his services and prevent his depredations. Some attempts to effect this object have already been made, by soaking the seed in some solution, which shall make it less palatable to the bird.* Crow Black Birds build their nests in communities, sometimes on bushes and sometimes on lofty trees, and several nests are frequently seen upon the same tree. The nest is composed outwardly of mud and coarse grass, and is lined inwardly with fine grass, hair, &c. The eggs, usually 5 or 6, are greenish, spotted with dark olive. Only one brood is usually reared in a season. About the time the leaves fall in autumn the old and young collect in very large flocks and commence their migration to the south, laying the whole country under contribution as they advance.

THE RUSTY BLACK-BIRD.

Quiscalus ferrugineus.—LATH.

DESCRIPTION.—General color of the male deep black, with greenish and bluish reflections; bill and feet black; iris pale yellow. Wings long; second quill longest; tail long, slightly rounded; plumage soft, blended, and glossy. Bill straight, tapering, and compressed from the base; nostrils, basal, oval, half closed above by a membrane. Body rather slender; feet strong; tarsus covered anteriorly with a few long scutella. Length 9½ inches; spread 14½, in males. General color of the female brownish black; the sides of the head over the eyes, and a broad band beneath it, light yellowish brown; the feathers of the lower parts more or less margined with brownish. Bill, iris, and feet as in the male.—Audubon.

HISTORY.—The Rusty Black Bird, called also the *Rusty Grackle*, passes through this state in its spring and fall migrations, and is sometimes seen here in considerable flocks, particularly in the fall. Some of them probably breed in the north part of the state. They resemble the Red-winged Black Birds in their habits and in the construction of their nests, which are built upon low bushes in moist meadows. The eggs are 4 or 5, of a light blue color, streaked and dashed with lines of brown and black.

* Peabody.

GENUS CORVUS.—Linnaeus.

Generic Characters.—Bill thick, straight at its base, slightly bent towards the point; nostrils basal, open and hidden by reflected bristly feathers; feet with three toes before and one behind, divided; the tarsus longer than the middle toe; wings pointed, first quill short, third and fourth longest. The tail consists of 12 feathers.



THE CROW.

Corvus americanus.—AUDUBON.

DESCRIPTION.—Color black and glossy, with violet reflections from the wings, tail and shoulder feathers; tail rounded, and extending an inch and a half beyond the folded wings; bill, legs, feet and claws black; bristly feathers incumbent upon each side of the bill covering the nostrils; the fourth quill feather longest; usual length 19 inches.

HISTORY.—The Crow is found in all parts of the world, and is one of the few large birds which pass the whole winter in Vermont. During the winter the Crows reside in flocks, but on the approach of spring they separate into pairs, and retire into the forests for the purpose of rearing their young. During this period they are vigilant, suspicious, and upon any real or supposed intrusion upon their purpose they become very noisy. They build their nests upon lofty trees, and usually select for that purpose such as have thick tops, in which the nests can be more effectually concealed. On this account the pine and other evergreens are often chosen. The nest is constructed exteriorly of sticks, plastered with earth, and lined with moss, wool, or other soft substances. Their eggs, from 4 to 6 in number, are of a pale green color, marked with streaks and blotches of brown. The Crow is omnivorous, devouring insects, worms, carrion, fish, grain, fruits, snakes, frogs and other reptiles, and also the eggs of other birds. In the spring of the year he does the agriculturist considerable damage by pulling up the young Indian corn for the sake of the kernel, on which account a

THE RAVEN.

bounty of 10 cents a head for his destruction was, for a time, authorized by legislative enactment. To prevent his depredations upon the corn fields various kinds of scare-crows have been devised, but that which is most commonly resorted to at present, consists in stretching threads of cotton yarn across the field in various directions. To compensate for the mischief which they do, it must be acknowledged that crows do the farmer some service by the destruction of grubs and insects, besides acting as general scavengers in removing the carcasses of dead animals. It is said they know how to break open nuts and shellfish, in order to eat what is within, by letting them fall from a great height upon the rocks below; and there is a story that, as a certain ancient philosopher was walking along the sea-shore gathering shells, one of these unlucky birds, mistaking his bald head for a stone, dropped a shell-fish upon it, and thus killed at once a philosopher and an oyster.*

The crow is easily tamed, and soon learns to distinguish those who have the care of him, but is of a thievish propensity, and often carries off valuable articles and hides them by thrusting them into holes and crevices.

THE RAVEN.

Corvus corax.—LINNÆUS.

DESCRIPTION.—Color of the plumage deep black, glossed with blue and purplish blue, the lower parts with green; feathers of the foreneck lanceolate and elongated; tail much rounded, reaching 2 inches beyond the wings; nasal feathers half the length of the bill; bill and feet black; iris dark chestnut brown. Length 26 inches, spread 50.—*Aud. Rich.*

HISTORY.—The Raven is a well known bird, being found in almost all parts of the world. Dr. Richardson says that it abounds in the fur countries, and extends its migrations northward even to the polar seas. It has for several years been less frequently seen in Vermont than formerly, and it was always a rare bird here compared with the crow. It feeds principally upon the carcasses and offals of the larger animals which are slain by hunters or wolves, or that die by disease. The Raven does not, like the crow, build its nest upon a tree, but in the inaccessible clefts of lofty precipices. The Raven is easily tamed, and manifests much attachment to its keeper. It may be taught to imitate the human voice and to articulate many words very distinctly.

* Nuttall.



THE BLUE JAY.

Corvus cristatus.—LINNÆUS.

DESCRIPTION.—General color light blue above, grayish white beneath; a stripe of black passes over the head and down on each side of the neck, forming a collar under the throat; a black spot before each eye connected by a black line over the base of the bill; crest pale blue in front, approaching to black on the back part; outer webs of the primaries, and both webs of the secondaries and wing coverts bright blue, the two latter barred with black and tipped with white; tail of 12 feathers, wedge-form, bright blue, barred with black excepting the two outer feathers, and tipped with white excepting the two inner ones; mouth, bill, legs, feet and claws black. Length of the specimen before me 11 inches.

HISTORY.—The Blue Jay is one of our most elegant and lively birds. It is common in every part of the United States, and is found as far north as the 56th° of latitude. It breeds in Vermont as well as in almost or quite every other state in the Union. They are somewhat migratory, most of them proceeding to the south in the fall. Audubon says they are very numerous in the southern states during the winter. They are most plentiful in Vermont in autumn, when they commit depredations upon fields of corn and oats. The greater part of them proceed to the south before winter sets in, but some remain with us after the snows fall, and purloin a scanty subsistence from our corn cribs and granaries. These birds are truly omnivorous, feeding upon almost any thing which falls in their way. In the summer season it destroys the eggs and young of other birds. When confined in a cage with several other birds, it has been known to kill and devour them all. The Blue Jay is a very active, noisy bird, and is capable of imitating the voice of the sparrow-hawk so nearly as to frighten all the small birds in the neighborhood. Its nest, which is composed of twigs and

THE CANADA JAY.

THE CHICADEE.

THE HUDSON BAY TITMOUSE.

fibrous roots, is built in trees. The eggs are 4 or 5, of a dull white color, spotted with brown.

THE CANADA JAY.

Corvus canadensis.—Linn.

DESCRIPTION.—General color dark leaden gray; hind head black; forehead, collar beneath, and tip of the tail brownish white; interior veins of the wings brown and partly tipped with white; bill and legs black; iris dark hazel, plumage of the head loose and prominent; tail long and wedge-shaped. Sexes alike in color. Length 11 inches; spread, 15. —*Nuttall*.

HISTORY.—This jay, which is called in some places the *Whiskey Jack*, and in others the *Carrier Bird*, inhabits principally between the 44th and 65th parallels of north latitude. It is found in the state of Maine, and in the north parts of New Hampshire, Vermont and New York, but is seldom seen further to the southward. It breeds in each of the states above named. The nest is usually placed in the thick top of a spruce or fir, at the height of 6 or 8 feet from the ground. It is placed near the trunk of the tree, and is made of twigs and fibrous roots, lined with moss and grass. The eggs are from 4 to 6, of a light gray color, faintly marked with brown. They feed, during the summer, upon worms and insects, and, during the winter, they are driven by necessity to feed upon the buds and leaves of spruce and fir.

GENUS *PARUS*.—Linnæus.

Generic Characters.—Bill short, straight, conic, compressed, entire, edged and pointed, having bristles at the base; the upper mandible longer, rounded above and slightly curved; nostril at the base of the bill, rounded and concealed by the advancing feathers; tongue blunt and cleft or entire, and acute, feet rather large, toes almost wholly divided; the nail of the hind toe strongest, and most curved; fourth and fifth primaries longest. The female and young differ but little from the adult male. *Mock, annual; plumage, long and slender.*



THE CHICADEE.

Parus atricapillus.—Linn.

DESCRIPTION.—The whole upper part of the head, nape, chin and throat, velvet

black; a white line from the nostril passing beneath the eye, spreads out upon the side of the neck; back ash color; quill and tail feathers brownish black, edged with grayish white; belly brownish white, deepening into brownish yellow upon the sides and beneath the tail; bill black; legs and feet bluish; fifth quill feather longest; fourth and sixth nearly as long; tail long and rounded. Length 5½ inches, tail 2½; folded wing 2.7, spread of the wings 6½.

HISTORY.—The Chickadee, or Black-cap Titmouse, seems to be common through the whole continent, from Mexico to the 65th degree of north latitude. They rear their young in all parts of the United States. For that purpose they take possession of the hollow of a decayed tree or of the deserted holes of the woodpecker, or where there are not to be had they excavate a cavity for themselves in some rotten stub of a tree. The materials of which the nest is composed, according to Audubon, vary in different districts, but are generally the hair of quadrupeds in considerable quantities, and disposed in the shape of a loose bag or purse lining the inside of the excavation, while others have said that without constructing any nest, they lay their eggs, usually 6 or 8, upon the dry rotten wood at the bottom of the cavity. The eggs are white, with specks of brownish red. This industrious little bird resembles the woodpeckers in many of its habits, running round upon the trunks and limbs of the trees with the greatest ease, frequently with its back downward, while searching for its food. Late in the fall, they may be seen in considerable numbers about our orchards and shade trees, and they doubtless render essential service by destroying the eggs and larvae of insects which have been deposited in the crevices of the bark, to be hatched the next spring.

THE HUDSON BAY TITMOUSE.

Parus hudsonicus.—Linn.

DESCRIPTION.—General color dull leaden, tinged with a light brown; head umber brown; throat and fore neck black, with a band of white under each eye; breast and belly grayish white, sides light yellowish brown. Bill black, short, straight, slightly convex and acutely pointed; iris dark brown; feet lead color. Length 5 inches, spread 7. Female resembles the male, but the colors are duller. —*Audubon*.

HISTORY.—This species is much less common in Vermont than the preceding,

THE CEDAR, OR CHERRY BIRD.

INSECTIVEROUS BIRDS.

and is not often seen farther to the southward than the north part of this state. It breeds in the state of Maine, and some of them very probably rear their young in the northeastern part of this state. Its nest, like that of the preceding, is in the hollow cavity of an old tree, and one, which Audubon found in Labrador, was completely lined with fur.

GENUS *BOMBYCILLA*.—*Brisson*.

Generic Characters.—Bill short, straight and elevated; upper mandible slightly curved towards the tip, and provided with a strongly marked tooth; nostrils at the base of the bill, oval, open, hidden by stiff hairs directed forward; tongue cartilaginous, broad at the tip and lacerated; feet with three toes directed forward, and one backward, the exterior united to the middle toe. Wings moderate, 1st and 2d primaries longest; the spurious feathers very short. Sexes alike in appearance and both crested.



THE CEDAR, OR CHERRY BIRD.

Bombycilla carolinensis.—*Brisson*.

DESCRIPTION.—Head, neck, breast, back and wing coverts yellowish brown, brightest on the front of the crest and darkest on the back; frontlet black, with a black line over the eye extending backward under the crest; chin blackish, a white line along the margin of the under jaw; belly yellow; vent white; wings dusky; rump and tail coverts dark ash; tail of the same color deepening into dusky and broadly tipped with bright yellow; more or less of the secondaries of the wings sometimes ornamented with small vermilion colored appendages, resembling sealing wax. The bill, legs and claws are black; iris red. In the female the tints are duller. Length $7\frac{1}{4}$ inches.

HISTORY.—This species inhabits all parts of the United States. It is most common in the southern states during the

winter and in the northern during the summer. These birds are very social in their habits, usually living in small flocks, even during the period in which they are rearing their young; and hence we usually find several of their nests in the same neighborhood, and often within a few rods of each other. The nest is usually placed in the top of a spruce or hemlock, at the height of 15 or 20 feet from the ground, and is constructed with sticks, roots and grass, lined with lint, down and other soft substances. The eggs, usually 4 or 5 in number, are of a pale clay-white, spotted with amber at the large end. These birds, which mostly migrate to the south in the fall, return to Vermont in April, and are found here during the summer in large numbers. During the early part of summer they feed upon worms and insects, and render an essential service by the destruction of these and the caterpillars, which infest our orchards; but this service is soon forgotten, and when the little bird claims for his reward, a few of the cherries, which he has protected, he is only answered by the gun of the ungrateful and cruel gardener. Although they feed upon fruits and berries of various kinds, they seem to be more fond of cherries and the berries of red cedar than any others, and hence their name *Cherry Bird*, or *Cedar Bird*.

INSECTIVEROUS BIRDS.

In birds of this order the bill is either short or of moderate length. It is straight, rounded or awl-shaped. The upper mandible is curved and notched towards the point, most commonly provided at the base with stiff hairs directed forward. The feet have three toes before and one behind, all on the same level. The outer toe is united to the middle one as far as the first articulation. Their food is insects in the summer, but principally berries during the colder part of the year. Their voices are, for the most part, melodious.

GENUS *LANIUS*.—*Linnaeus*.

Generic Characters.—Bill of medium size, strong, straight from the base, considerably compressed; upper mandible much bent, toothed and hooked towards the tip, which is acute; base of the bill without a cere, furnished with strong bristles directed forward; nostrils close to the base, lateral, nearly round, half closed by a vaulted membrane, and nearly concealed by the bristles; tarsus longer than the middle toe; feet with three toes before and one behind, free; the third and fourth quills longest.

THE BUTCHER BIRD.

THE KING BIRD.



THE BUTCHER BIRD.

Lanius borealis.—VIEILLLOT.

DESCRIPTION.—Color above pale cinereous, becoming nearly white towards the tail; wings and tail brownish black, with a black bar extending from the nostril through the eye to the neck; beneath white, beautifully waved with pale brown; outer feathers of the tail partly white and a whitish spot on the wings just below their coverts; legs and feet black; bill and claws bluish black. Tail rounded, extending 3 inches beyond the folded wings; third primary longest. Length of the specimen before me 10 inches, spread 13.

HISTORY.—The Butcher-Bird, or, as he is, perhaps, more generally called, the *Great Northern Shrike*, though frequently seen in Vermont, is not very common. The specimen from which the above description and figure were made, was shot in Burlington in May, 1842. Dr. Richardson says that this bird is common in the woody districts of the fur countries as far north as the 60th parallel of latitude. Many of them migrate to the south in the fall, but some remain in the fur countries through the winter. Its nest is built in the fork of a tree, of grass and moss, and lined with feathers. The eggs, 5 or 6 in number, are of a pale bluish gray, spotted at the large end with dark yellowish brown. Like the king bird it attacks eagles, hawks and crows, and drives them from the neighborhood of its nest.

GENUS MUSCICAPA.—Linnaeus.

Generic Characters.—Bill medium sized, rather stout, angular, considerably widened and flattened towards the base, which is guarded by longish bristles; upper mandible notched towards the end and bent at the tip; nostrils basal, lateral and ovoid, partly hid by hairs; tarsus the same length as the middle toe or a little longer; inner toe free, or scarcely united at the base; hind nail more curved than the rest, and larger than that of the middle toe; wings long and somewhat sharp; first quill very short, the second shorter than the third and fourth, which are longest.



THE KING BIRD.

Muscicapa tyrannus.—BRIDSON.

DESCRIPTION.—Color of the head when the feathers are smooth, shining velvet black, but when the feathers are ruffled a spot of bright ochrey yellow appears on the crown; back brownish black; wings very dark, hair brown, the secondaries and wing coverts edged with gray; tail even, pitch black, tipped with white, and extending far beyond the wings; breast light ash; belly white; bill, legs and feet black; bill wide at the base gradually narrowing to the tip; upper mandible with convex sides, meeting in an obtuse ridge and hooked at the point; short, stiff bristles at the angle of the mouth; second quill longest. Length 8 inches, spread of the wings 14.

HISTORY.—The King Bird, or Tyrant Fly-catcher, as he is sometimes called, spends the winter at the south, beyond the limits of the United States. Early in the spring he proceeds to the north and during the summer is found rearing its young in all parts of the United States, and, according to Richardson, as far north as the 57th parallel of latitude. It arrives in Vermont in the early part of May, and in the summer is common in all parts of the state. Its nest is built in the tops of orchard and forest trees, at various heights from the ground, and is composed of coarse dry grass, weeds and loose pieces of bark, compactly connected and bedded with down, tow and woolly substances, and lined with fine fibrous roots, grass, and hair. The eggs are from 3 to 5, of a bluish white color, marked with spots of deep bright brown. The same pair frequently rears two broods in a season. The food of the king bird consists almost entirely of insects, such as beetles, crickets, grasshoppers and various kinds of flies and caterpillars, and the only harm, which he is accused of doing, is that of catching a few honey bees as they are gathering honey from the flow-

THE PHOEBE.

THE WOOD PEWEE.

THE SMALL PEWEE.

ers, which is very trifling compared with the services which he renders the farmer and gardener. The king bird manifests no fear of the larger birds, but whenever, during their breeding season, a hawk or crow comes near his nest, he boldly attacks him, pounces upon his back, and persecutes him till he is glad to abandon the neighborhood.



THE PHOEBE.

Muscipapa fusca.—BONAP.

DESCRIPTION.—General color above brown with an olive tinge, darker on the head; wings and tail blackish brown, the feathers having the appearance of being faded and worn, and the color of their shafts dark amber; an indistinct grayish circle around the eye, the pupil of which is bluish black and the iris dark hazel; belly yellowish white; tail slightly forked. Bill broad, hooked at the point, and wholly black; legs and feet black with sharp claws. Length of the specimen before me 6½ inches; folded wing 3.4; tail 2.7 and reaching 1.4 beyond the folded wings. The 3d quill longest, 2d and 4th equal.

HISTORY.—This well known and familiar bird arrives from the south about the beginning of April and retires again in October. During the summer it is found in all parts of the state. It seems to prefer building its nest beneath bridges, in sheds and under the eaves of barns. The nest is usually constructed of mud and moss, and lined with grass, hair and other fibrous substances, and is sometimes built upon the top of beams, and at others stuck upon the sides. The eggs are 4 or 5, and are white and unspotted. These birds become very much attached to places where they have reared their young, and the same pair will resort to a particular locality for that purpose, many years in succession. In illustration of this statement I will mention one, of several cases which have fallen under my own

observation. About the year 1836 two of these birds built a nest upon a shelf in my wood-shed, and for two years in succession raised broods of young-ones in the same place. The third year when the young were about half grown the female bird disappeared. The male bird remained about the nest, but, not feeding the young ones, they died. The male staid till fall and then left, but returned alone in the spring; and for three successive summers that bird sung his solitary and sad lament for her to whom his young heart and early vows had been plighted, 'around the place which had been the scene of mutual joys. The name of this bird is derived from the sound of its note. It is also called the *Phoebe Flycatcher*.

THE WOOD PEWEE.

Muscipapa virens.—LINN.

DESCRIPTION.—Color dusky brownish olive; head brownish black, slightly crested; below pale yellowish, inclining to white. Tail forked; 2d primary longest; 1st much shorter than the 3d, and longer than the 6th. Length 6 inches; spread 10. The female a little smaller.—*Nutt.*

HISTORY. This species bears considerable resemblance to the preceding, but differs from it in its habits and notes. It arrives later in the spring, and confines itself principally to the thickets and forests. Its nest is usually attached to the horizontal branch of a tree, and is very curiously constructed of grass, fine roots, lichens and cobwebs, held together by a glutinous cement, and is so thin as to appear almost transparent. The eggs are 4 or 5, of a light yellowish hue, spotted with reddish brown towards the large end.

THE SMALL PEWEE.

Muscipapa acedica.—GUNT.

DESCRIPTION.—Color above dusky olive green; yellowish white beneath, inclining to ash on the breast; wings dusky brown, crossed with two bars of dull white; outer edge of the 1st primary, edges of the secondaries, and ring around the eye, whitish; under wing coverts pale yellow; 2d, 3d, and 4th primaries nearly equal and longest. Tail pale dusky brown, notched; legs and feet black. Sexes nearly alike. Length 5½ inches; spread 9.—*Nuttall.*

HISTORY.—This species is common during the summer in all the northern parts of the United States and Canada, but none of them were seen by Audubon or his party in Labrador. It breeds in this

THE SPOTTED FLY-CATCHER.

state, and usually fixes its nest in the upright forks of a small tree, at a height of from 8 to 30 feet from the ground. The eggs, from 4 to 6 in number, are white and unspotted. It feeds, like the other species of this genus, upon bees, flies and moths.

THE SPOTTED FLY-CATCHER.

Muscicapa canadensis.—LINN.

DESCRIPTION.—Male with the upper parts ash-gray; the feathers of the wings and tail brown, edged with gray; the head spotted with black; loreal space, a band beneath the eye proceeding down the side of the neck, and a belt of triangular spots across the lower part of the fore neck, black; lower parts, and a bar from the nostril over the eye pure yellow; lower wing and tail coverts white; the third quill longest, the second and fourth but little shorter; tail rounded. *Female* similar to the male, but the colors fainter. *Young* with the neck unspotted. Length 5, spread 9.—*Audubon*.

HISTORY.—This bird, according to Audubon, gives a decided preference to mountainous districts, and particularly to such as are covered with a thick growth of underwood and shrubbery. We are informed by the same high authority that its nest is placed in the fork of a bush, made of moss and lined with grass—that the eggs, usually 5, are white, with a few spots of bright red towards the large end. It probably breeds in Vermont, but I have no positive proof of the fact.

GENUS VIREO.

Generic Characters.—Bill rather short, a little compressed, and furnished with bristles at its base; upper mandible curved at the extremity and strongly notched; the lower shorter and recurved at the tip; nostrils basal, rounded; tongue cartilaginous and cleft at the point; tarsus longer than the middle toe; wings rather acute, the 2d or 3d primary longest. *Female* resembles the male, and both sexes more or less tinged with olive green.

THE YELLOW-THROATED VIREO.

Vireo flavifrons.—VIEILLLOT.

DESCRIPTION.—Color yellow-olive above, belly white; throat, breast, frontlet and line round the eye yellow; lesser wing-coverts, lower part of the back and rump, ash; wings nearly black with two white bars; tail blackish, a little forked; primaries edged with pale ash, secondaries with white; exterior tail feathers edged with white; legs, feet and bill grayish-blue; iris hazel. The yellow of the fe-

male and young duller. Length 5½, spread 9.—*Nuttall*.

HISTORY.—This species rears its young in the south part of the state. Its nest is suspended upon the limb of a tree, and is constructed of strips of bark and fibrous substances, which are cemented together with saliva. The eggs are about 4 in number, are white and spotted towards the larger end with blackish.

THE WHITE-EYED VIREO.

Vireo noveboracensis.—BONAPARTE.

DESCRIPTION.—Yellow olive above, white beneath; sides, line round the eye and spot near the nostrils yellow; wings dusky, with two yellow bands; tail dusky brown, forked; bill, legs and feet light bluish-gray; iris white. Length 5½; spread 7.—*Nutt*.

HISTORY.—This species constructs its nest very much in the manner of the preceding, but usually builds nearer the ground. It lays 4 or 5 eggs, which are white, spotted towards the large end with brown.

THE RED-EYED VIREO.

Vireo olivaceus.—BONAP.

DESCRIPTION.—General color above yellow olive; crown dark ash; a light gray line from the upper mandible passes over the eye and widens behind it, with a dark line above and another below, extending from the eye to the rictus; all beneath whitish, tinged with light yellow under the wings and on the sides; wing and tail feathers brownish black, with their outer margins yellow olive; 2d and 3d primaries longest; bill brown above, lighter beneath, straight, abruptly bent and notched at the point; nostrils roundish, basal; a few weak bristles at the angle of the mouth; iris bright brick red; legs bluish gray; tail slightly forked. Length 6 inches; tail 2.4; folded wings 3.3; bill above .5, to the angle of the mouth .75; tarsus .7.

HISTORY.—This is probably the most common species of Vireo found in Vermont. They arrive early in May, and take up their residence in the forests and the lofty trees around our fields and gardens. Their song is loud, lively, and energetic. They feed principally upon insects and caterpillars. Their nest is constructed of strings, strips of bark, and fibrous substances, agglutinated together into the form of a pouch. The eggs are 3 or 4, white, with a few blackish brown spots towards the large end. The cow black-bird lays its egg in the nest of this

THE SOLITARY VIREO.

THE BROWN THRUSH.

THE CAT BIRD.

bird more frequently than in any other. The specimen from which the foregoing description was made, was shot in Burlington.

THE SOLITARY VIREO.

Vireo solitarius.—VIEILLOT.

DESCRIPTION.—Dusky olive above; belly white; head bluish gray; breast pale cinereous, inclining to reddish gray on the throat; flanks and sides of the breast yellow; wings dusky brown, with two white bands; tail emarginate and nearly black; primaries and tail feathers bordered with light green; a line of white from the nostril to the eye, which it encircles; bill short, broad; upper mandible black, lower pale bluish gray; iris hazel. Female with the head dusky olive and the throat greenish. Length 5 in.; spread 8.—*Nut.*

HISTORY.—This is a rare bird in this state; but is said to resemble the preceding species in its habits. It suspends its nest from the forked twigs of bushes, and lays 4 or 5 eggs, which are light flesh color, with brownish red spots towards the large end.

GENUS TURDUS.

Generic Characters.—Bill of moderate dimensions, with cutting edges, compressed and curved towards the point; the upper mandible generally notched towards the extremity, the lower roundish; a few scattered bristles at the angle of the mouth; nostrils basal, lateral, rounded, and half closed by a naked membrane; tongue notched at the tip; feet rather stout; tarsus longer than the middle toe, which is attached at the base to the outer one; wings rather short, the third, fourth and fifth quill longest. The female and young differ little from the male, excepting the young are more spotted. They moult annually.

THE BROWN THRUSH.

Turdus rufus.—LINNÆUS.

DESCRIPTION.—All the upper parts, and the under side of the tail, bright reddish brown; breast and belly yellowish white, marked with long pointed dusky spots; wings crossed by two whitish bars, relieved with black; tail long, reaching near 4 inches beyond the wings, and rounded; bill long, slightly arched, black above, and whitish below near the base; nostrils naked; short, stiff, black bristles over the angle of the mouth; legs, feet and claws dusky brown; tarsus scutellated in front, middle toe much the longest; iris bright orange. Length 11 in.; spread of the wings 13 inches.

HISTORY.—This bird is known in many places by the name of French Mocking

Bird, and surely no bird, if we except the Mocking bird (*Turdus polyglottus*), excels it in the variety and sweetness of its song. It arrives here from the south the latter part of April, and commences building its nest early in May. The nest is commonly built upon the ground, or but little elevated above it, in some little thicket, and is constructed with sticks and lined with fine fibrous roots. The eggs are 4 or 5 in number, of a greenish white color, and sprinkled all over with reddish brown spots. During the period of incubation the male will often sit and sing for hours upon the top of a neighboring tree. His music is original, but varied, full, and charming. The food of the Brown Thrush consists of insects, worms, berries, and fruits of various kinds. This bird is known in many places by the name of Thrasher, or Red Thrasher.



THE CAT-BIRD.

Turdus feliceus.—VIEILLOT.

DESCRIPTION.—General color dark slate, lighter beneath; top of the head, bill, and inside of the mouth, black; under tail coverts reddish chestnut; bill a little hooked at the point; legs and feet brown; first quill very short, the 4th and 5th longest; quill feathers lighter on the outer edges; tail long and rounded. Length 8½ inches; spread of the wings 11½ in.

HISTORY.—The Cat Bird is very common in all parts of Vermont, where it arrives from the south in the early part of May. This bird, like most others of the family, is an excellent songster, and may be heard in almost every neighborhood during the early part of summer, ushering in the dawn with his cheerful strains. When this bird is disturbed while rearing its young, its note is harsh and unpleasant, somewhat resembling the mewling of a cat, and from this circumstance it undoubtedly received the name of Cat Bird. The Cat Bird builds its nest in a thicket of bushes, at the height of 5 or 6 feet from the ground. It is constructed with sticks and briars, and lined with fine thread-like roots, which are of a dark color. The

THE ROBIN.

WILSON'S THRUSH.

NEW YORK THRUSH.

eggs are 4 or 5, of a bluish green color, and without spots. Like the Mocking Bird, the Cat Bird is often known to imitate the notes of other birds, and sounds of various kinds. The food of the Cat Bird is similar to that of the preceding species, being made up of worms, beetles, cherries, and various other insects, fruits and berries.



THE AMERICAN ROBIN.

Turdus migratorius.—LINNÆUS.

DESCRIPTION.—Color of the head, back of the neck and tail brownish black; the back and rump dark ash; breast dark reddish orange; belly and vent white; chin white, spotted with brownish black, wings blackish brown; the exterior edges of the feathers faded and grayish; exterior tail feathers white at their inner tip; three white spots margin the eye. The bill is lemon yellow, with a brownish tip; legs and feet dark brown. The young, during the first season, spotted with white and dusky on the breast. Length 9 inches.

HISTORY.—This universal favorite is found, during the summer, throughout nearly the whole of North America. They retire to the south late in autumn, where they pass the colder part of the winter; but, returning early to the north, reach Vermont usually about the 20th of March; and their arrival is always hailed with joy, as the unerring harbinger of approaching spring. While the snow continues upon the ground, the Robin subsists principally upon the berries which remain upon the sumach, mountain ash and red cedar. The Robin, as is well known, is a very familiar bird, and seems to seek to place its nest where it shall be under man's protection. And hence we find its nest most frequently in gardens and orchards. The nest is sometimes built upon a fence, a wall, or a stump, but more commonly in the fork of an apple-tree or other small tree. It is constructed with grass and mud firmly bedded together, and lined with fine straw

* See page 13.

and blades of grass. The eggs, usually 5, are of a bluish green color and unspotted. During the summer their food consists of worms, insects, and various kinds of berries. The Robin is easily tamed, and in the domesticated state may be taught to imitate not only the notes of other birds, but various strains of music.

WILSON'S THRUSH.

Turdus Wilsonii.—BONAPARTE.

DESCRIPTION.—Upper parts uniform light reddish-brown, a little deeper on the head; quill and tail-coverts light olive-brown, the outer webs of the former like the back; lower parts grayish-white, the sides and lower part of the neck, and a small portion of the breast tinged with pale yellowish brown, and marked with small, faint and undecided triangular brown spots; wings with the 3d quill longest; the 4th scarcely shorter, and slightly exceeding the second. Length 7; spread 12.—*Ludlow.*

HISTORY.—This species arrives from the south in the early part of May, and immediately commence the construction of their nests. These are built in low, thick bushes, in the dark parts of the forests, sometimes upon the ground, but more commonly from 1 to 3 feet above it. The eggs, 4 or 5 in number, are of an emerald green without spots, and differ very little from those of the Cat Bird, with the exception of being a little smaller. They usually raise two broods in a season.

THE NEW YORK THRUSH.

Turdus noveboracensis.—NUTTALL.

DESCRIPTION.—Color of the whole upper plumage a uniform deep hair brown; stripe over the eye and whole under surface pale primrose yellow, marked with pencil-shaped spots of the color of the upper plumage; inner wing coverts yellowish gray, spotted with brown near the edge of the wing; bill dark amber brown above, paler beneath; legs brownish flesh color. The three first quills nearly equal and longest; tail nearly even; lateral toes nearly equal; nails small and of the color of the bill. Length 5½ inches; tail 2½; folded wing 3; bill from the angle of the mouth ¾ inch.

HISTORY.—The Aquatic Thrush is quite a common bird in Vermont, but is of retiring habits and therefore seldom seen except in the thickest parts of the forests. Its nest is built upon the ground and is constructed of leaves and moss, and lined with fine roots and sometimes with hair. The eggs are 4 or 5, of a yellow-

THE THRUSHES.

ish white color and pretty thickly sprinkled towards the large end with two shades of reddish brown. The specimen from which the above description was made was obtained, with its nest and eggs, in Burlington, in June, 1840. This bird from its preference to neighborhoods of water is sometimes called the *Aquatic Thrush*.

THE GOLDEN-CROWNED THRUSH.

Turdus eurocapillus.—WILSON.

DESCRIPTION.—Color above rich yellow-olive; the tips of the wings and inner vanes of the quills dusky brown; the 3 first primaries nearly equal; a dusky line from the nostril to the hind head; crown brownish orange; beneath white; the breast covered with deep brown pencil-shaped spots; legs pale flesh-color; bill dusky above, below whitish. Crown of the female paler. Length 6, spread 9. *Nuttall*.

HISTORY.—This bird is pretty common in nearly all parts of the United States, but is shy and retiring, and found only in the thickets of the forests. Its oven shaped nest is placed in the side of a dry and mossy bank and is constructed with great neatness. It is formed of grass and covered with leaves and sticks, having the place of entrance upon the side. The eggs are 4 or 5, whitish, irregularly spotted with reddish brown. The food of this bird consists wholly of insects and their larvae.

THE HERMIT THRUSH.

Turdus solitarius.—WILSON.

DESCRIPTION.—Color above plain deep olive-brown, below dull white; upper part of the breast and throat cream color; the dusky brown pencillated spots carried over the breast and under the wings where the sides are pale olive; tail and coverts as well as the wings strongly tinged with rufous; legs pale flesh color; bill short black above, flesh-colored below; iris large and nearly black; tail short and emarginate; 3d primary longest. The female darker, with the spots on the breast larger and more dusky. Length $7\frac{1}{2}$; spread $10\frac{1}{2}$.—*Nutt*.

HISTORY.—The Hermit Thrush is said to inhabit every part of the United States. It is a solitary bird living wholly in the woods, and is said by Nuttall to be scarcely inferior to the Nightingale in its powers of song. Its nest according to Audubon is placed upon the limbs of trees a few feet from the ground, and is composed of dry weeds and leaves, and neatly lined within with fine grass. The eggs,

from 4 to 6, are of a light blue color, sprinkled with blotches towards the large end.

GENUS SYLVIA.—Latham.

Generic Characters.—Bill straight, slender, awl-shaped, higher than wide at the base, and usually furnished with scattered bristles; lower mandible straight, upper sometimes notched; nostrils lateral, oval, situated at the base of the bill, and partly covered by a membrane; tarsus longer than the middle toe; inner toe free; hind nail shorter than the toe; wings short.

THE YELLOW-CROWNED WARBLER.

Sylvia coronata.—LATHAM.

DESCRIPTION.—Back dark ash, spotted or striped with black; crown, sides of the breast and rump bright yellow; wings and tail black, with the outer vanes of the feathers margined with white or light ash; wing coverts tipped with white, forming two white bars across each wing; outer tail feathers on each side with a large white spot on their inner vane; breast white, spotted with black; belly and vent white; bill black, straight, slightly bent at the point and rounded above and below; legs and feet black; tail forked; the 2d, 3d and 4th primaries nearly equal; 1st but little shorter. Winter dress and that of the young paler, and of an olivaceous hue. Length of the specimen before me $5\frac{1}{2}$ inches; spread of the wings $7\frac{1}{2}$ inches.

HISTORY.—The Yellow-crowned Warbler, or *Myrtle Bird*, as it is sometimes called, is common in Vermont, and I am informed by Dr. Brewer that they breed in the north part of the state. The nest, according to Audubon, is placed upon the horizontal branch of a fir or other evergreen. It is compactly built of sticks and strips of bark, and lined with hair, feathers and down. The eggs are of a rosy tint, thinly spotted with reddish brown towards the large end. Their food is insects and caterpillars in summer and they feed upon seeds, and myrtle and other berries during the winter.

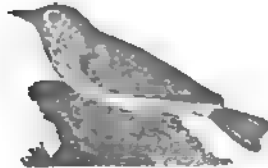
THE YELLOW RED-POLL WARBLER.

Sylvia petechia.—LATH.

DESCRIPTION.—Male with the crown deep brownish red; upper parts yellow olive streaked with brown; rump greenish yellow without streaks; wings and tail dusky brown with the feathers edged with whitish or yellowish; a bright yellow streak from the nostril over the eye; lower parts yellow; the sides of the neck, its

lower part, and the sides of the body streaked with deep red; the three outer quills nearly equal; tail emarginate. Colors of the female duller. The young dull light greenish brown, tinged with gray. Length 5½, spread 8½.—Aud.

HISTORY.—Very little is yet known of the history of this bird. During the winter it is found in large numbers in the southern states, and early in the spring passes through New England, to rear its young at the north and returns again in the fall. Audubon found them plentiful in Labrador and Newfoundland, in August, feeding their young, but did not succeed in discovering any of their nests.



THE SUMMER WARBLER.

Sylvia aestiva.—LATH.

DESCRIPTION.—Greenish yellow above; crown and beneath bright golden yellow; breast and sides with long spots of reddish orange; wings and tail brown, edged with yellow; tail emarginate; bill grayish blue; legs pale. Female with the colors duller, and the breast unspotted. Young greenish olive above, with the throat yellowish white. Length 5, spread 7.

HISTORY.—This is one of our most beautiful and musical Warblers. It arrives in Vermont in the early part of May, and the female is soon engaged in the construction of her nest, while the male is spending the most of his time in cheering her and the neighborhood with his song. The Summer Warbler seems to delight in building its nest and rearing its young in our orchards and on the trees around our dwellings, as if conscious of its ability to afford us pleasure by its music. Several pairs of these birds are now (June 24, 1842,) rearing their young and warbling in the heart of our village, and two have their nest on a tree in my garden. It is built of a few coarse straws, shreds of bark, and woolly lint, lined with horsehairs and bristles. The eggs are 4, of a yellowish white color, sprinkled with specks of pale brown towards the large end. It is said that the Cow-Black Bird often deposits its eggs in the nests of these birds, and that they are in the habit of incarcerating them in the manner described

on page 69; and, as I have learned since that article was printed, that the nest there described was built about the beginning of June, much earlier than the *Fringilla tristis* usually builds; it is probable that the yellow bird there mentioned, was the *Sylvia aestiva*, or Summer Yellow Bird, as this is often called.

THE SPOTTED WARBLER.

Sylvia maculosa.—LATH.

DESCRIPTION.—Crown ash; back blackish; tail coverts, tail and wings black, the latter crossed by two bars of white; rump and beneath bright yellow; breast spotted with black; vent white; legs brown; bill, front, lores and behind the ear black. Female with the breast whitish, and the colors duller. Length 5, spread 7½.—Nutt.

HISTORY.—This beautiful species is only occasionally seen in its passage towards the north in the spring. It is said to build its nest around Hudson's Bay, upon the willows. It is considered one of the most musical and most beautiful of the American Warblers.

THE NASHVILLE WARBLER.

Sylvia rubicapilla.—WILSON.

DESCRIPTION.—Yellowish green, or olive above; breast, chin and under tail coverts yellow; belly whitish; head and neck dark ash, inclining to olive; crown deep chestnut; wings and tail hair brown; feathers more or less edged with yellow on the outer vanes; tail slightly forked; bill brownish, straight and very sharp; legs and feet brownish yellow. The female is said to be paler beneath, grayish and without the chestnut on the crown. Length of the specimen before me, which is a male, 4½ inches, spread of the wings 6½ in.; the 2d and 3d primaries longest; the 1st and 4th nearly equal.

HISTORY.—This species was discovered by Wilson near Nashville, Tennessee, and is represented by ornithologists as being a very rare bird. Audubon says he has never seen more than three or four of them. The specimen from which the above description was made, was shot in Burlington, in the spring of 1840, and is the only one I have seen.

BLACK-THROATED GREEN WARBLER.

Sylvia virens.—LATH.

DESCRIPTION.—Color yellowish green above; beneath whitish; front, cheeks, sides of the neck, and line over the eye,

THE WARBLERS.

THE WARBLERS.

yellow; chin and throat to the breast black; wings and tail dusky, the former with two white bars, and the latter with the three lateral feathers, marked with white on their inner webs; bill black; legs and feet brownish. *Female* with the chin yellow, and the throat blackish, tinged with yellow. Length 5, spread 7½.—*Nutt.*

HISTORY.—This species, though rare, probably breeds in this state. Mr. Nuttall found one of their nests in Massachusetts, in June, 1830. It was in a low, thick and stunted Virginia juniper, and was made of fibrous bark, and lined with feathers, grass, and a few hairs. The eggs were 4, whitish, sprinkled towards the large end with brown and blackish.

PINE CREEPING WARBLER.

Sylvia pinus.—LATH.

Sylvicola pinus.—Aud. Am. Birds, 11.—37, pl. 82.

DESCRIPTION.—Male with the upper parts yellowish green, inclining to olive, the rump brighter; streak over the eye; eye-lids, throat, breast and sides bright yellow, with a greenish tinge; the rest of the lower parts white; wings and tail blackish brown; secondary coverts and first row of small coverts tipped with dull white; primaries edged with whitish, secondaries with brownish gray; outer two tail feathers with a patch of white on their inner web near the end. Wings moderate, first three quills nearly equal; tail emarginate. *Female* and *young* brownish above, other colors duller. Length 5, spread 8.—*Aud.*

HISTORY.—This is one of the most common species of Warblers in the United States, being met with from Louisiana to Maine, but more abundantly at the south than at the north. It resembles the Creepers in running upon the trunks of trees. Its nest is placed high upon the limbs of trees, and is composed of dry grass and roots, lined with hair. The eggs, from 4 to 6, have a light sea-green tint, and are sprinkled with reddish brown dots, thickest towards the large end.

THE CÆRULEAN WARBLER.

Sylvia cærulea.—WILS.

DESCRIPTION.—Wings long, 3 outer quills nearly equal, 1st and 2d longest; upper parts fine light blue, brighter on the head; the back marked with longitudinal streaks of blackish; a narrow band of black from the forehead along the lore to behind the eye; two white bands on the wings; quills black, margined with pale blue; tail slightly emarginate; feath-

ers black, edged with blue, with a white patch on the inner web of each toward the end; lower parts white, with a band of dark bluish gray across the foreneck, and oblong spots of the same along the sides. *Female* with the upper parts light bluish green, the lower yellowish; *young* like the female. Length 4½, spread 8.—*Audubon.*

HISTORY.—This species is not very common in the northern part of the United States. Its nest, according to Audubon, is built upon bushes, constructed with stalks and fibres of vines, and lined with moss. The eggs are 4 or 5, white, spotted at the large end with reddish.

BLACKBURN'S WARBLER.

Sylvia Blackburnia.—LATH.

DESCRIPTION.—The head striped with black and orange; back black, skirted with ash; wings black, with a large lateral patch of white; throat and breast reddish-orange, bounded by streaks and spots of black; belly dull yellow, streaked with black; vent white; tail a little forked, 3 lateral feathers white on the inner web; cheeks black; bill and legs brown. *Female* yellow, without orange, and black spots fewer. Length 4½, spread 7.—*Nutt.*

HISTORY.—This is a rare bird in the United States. But few of them are seen in Vermont, and yet it is said that some of them rear their young here. The nest is placed in the fork of a small tree but a few feet from the ground, and is lined with hair and feathers. The eggs are white, sprinkled with red towards the large end.

THE CHESTNUT-SIDED WARBLER.

Sylvia icterocephala.—LATH.

DESCRIPTION.—Crown yellow; feathers of the back and rump black, edged with greenish white; wings dusky, the primaries edged with white and the secondaries with greenish yellow; the first and second row of coverts broadly tipped with light yellow, forming two bars on each wing; a triangular black spot beneath the eye; chin and belly white; sides, from the black beneath the eye to the thighs, and across the breast, bright chestnut; tail forked, dusky above, white beneath; legs, feet and bill dusky; iris hazel. Length 5, spread 7.

HISTORY.—This beautiful warbler is represented by Audubon as being extremely rare in all parts of the United States. The specimen, from which the above description was drawn, was killed

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THE BLACK AND WHITE CREEPER.

GENUS REGULUS.

in Burlington, on the 11th of June, 1842, and it is thought to be rather a common bird here, and I have but little doubt that it breeds in this state, although I have never seen its nest. Audubon professes himself ignorant of their breeding places; but Nuttall and Peabody assure us that several of their nests have been found in Massachusetts.

THE BLACK-THROATED WARBLER.

Sylvia canadensis.—LATH.

DESCRIPTION.—Light blue slate above; beneath white; wings and tail dusky black, the latter wedge-shaped, edged with blue, feathers pointed, external ones with a large white spot; throat, cheeks, upper part of the breast and sides under the wings, deep black; legs and feet dusky yellow; bill black; a white spot on the wings. The black in the female dusky ash, or wanting. Length 5, spread 7½.—Nutt.

HISTORY.—This species is rare and very little known. Its nest, according to Audubon, is placed on the horizontal branch of a fir, 6 or 8 feet from the ground. The eggs, 4 or 5 in number, are of a rosy tint, sprinkled with reddish-brown at the large end.

THE MARYLAND YELLOW-THROAT.

Sylvia trichas.—LATH.

DESCRIPTION.—Yellow-olive above, inclining to cinereous on the crown; front and wide patch through the eye black; throat, breast and vent yellow, fainter on the belly; wings, and unspotted wedge-shaped tail, dusky brown; quills of both edged with yellow-olive; bill black above, pale beneath; legs pale flesh-color; iris dark hazel. Female without black on the face, and beneath dull yellow. Length 5, spread 7.—Nutt.

HISTORY.—This is quite a common bird. It arrives from the south in the early part of May. Its nest, according to Peabody, is constructed on or near the ground, among dry leaves, brush or withered grass. The eggs, 4 or 5, are white, with blotches and lines of brown chiefly towards the large end.

THE WORM-EATING WARBLER.

Sylvia vermivora.—LATH.

DESCRIPTION.—Dusky olive above except the wings and tail, which are umber brown. Head buff, marked with 4 longitudinal stripes of umber brown; breast orange buff, mixed with dusky; vent wa-

ved with dusky olive; bill blackish above, below flesh colored; legs pale flesh color; iris hazel; bill stout. Length 5½, spread 8.—Nuttall.

HISTORY.—This active and industrious little bird is said to arrive late from the south and retire early, and resembles somewhat the Chickadee in its manners and notes. Its nest, according to Audubon, is made of dry mosses, hickory and chestnut blossoms, and the eggs are 4 or 5, cream colored, with a few dark red spots near the large end. The nest is usually placed between two twigs, 8 or 9 feet from the ground.

BLACK AND WHITE CREEPER.

Sylvia varia.—LATH.

DESCRIPTION.—The crown white, bordered on each side by a band of black, which is again bounded by a line of white passing over each eye; ear feathers black, as well as the chin and throat; wings the same, with 2 white bars; breast back, sides, and rump spotted with black and white; tail and primaries edged with light gray, the coverts black, bordered with white; belly white; legs and feet dusky yellow; bill rather long, black above, paler below. Female with the crown wholly black, and without the black ear-feathers. Length 5, spread 7½.—Nuttall.

HISTORY.—This bird is found in most parts of the United States, and in many of its habits is closely allied to the Creepers and Nuthatches. It seldom perches upon the branches of trees, but creeps spirally round upon the trunk and large limbs, searching for insects and their eggs in the crevices of the bark. Dr. Brewer informs us that this bird builds its nest upon the ground. It is composed externally of coarse straw, and lined with hair. The eggs, about 4 in number, are white, with a few brownish red spots, chiefly towards the large end.

GENUS REGULUS.—Cuvier.

Generic Characters.—Bill short, straight, very slender, subulate, compressed from the base, and narrowed in the middle, furnished with bristles at the base, and with the edges somewhat bent in; the upper mandible is slenderly notched, and a little curved at the tip. Nostrils basal, oval, half closed by a membrane, and additionally covered also with two small projecting, rigid, decomposed feathers. Tongue bristly at the tip. Feet slender; tarsus longer than the middle toe; lateral toes nearly equal; the inner one free; hind toe stoutest. Wings short, rather acute; 3d and 4th primaries longest; tail notched.

THE RUBY AND FIERY-CROWNED WRENS.

THE HOUSE AND WINTER WRENS.

THE RUBY-CROWNED WREN.

Regulus calendula.—STEPHENS.

DESCRIPTION.—Color above olivaceous, yellowish on the rump and grayish on the head, with a bright vermillion colored spot on the hind head, which is partly concealed by the dark feathers; wings and tail brownish black, with the outer edges yellow; wing coverts terminated with white, forming a whitish bar upon the wings; a yellowish white line around the eye; beneath, brownish white on the neck, changing into yellowish white on the belly; upper mandible slightly curved near the tip; legs, toes and nails long, slender, and of a smoky brown color. Length 4; spread 5½.

HISTORY.—The history of this little songster is very imperfectly known. It is found during the winter, in considerable numbers, in the southern states, and, in the northern states, is frequently seen in its migrations to the north and south, in spring and fall. Audubon has no doubt but that it breeds in Labrador, but neither he nor any other of our ornithologists has succeeded in finding its nest. The beautiful specimen from which the above description was made, was killed in Burlington on the 26th of April, 1842.

THE FIERY-CROWNED WREN.

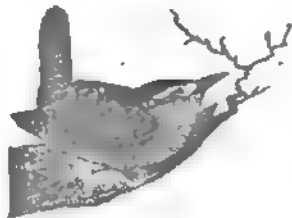
Regulus tricolor.—NUTT.*Regulus satrapa*.—Aud. Am. Birds, II—165, pl. 132.

DESCRIPTION.—Color above ash gray on the neck, and the back yellowish olive; cheeks grayish white; crown flame colored, bordered with yellow and black; beneath whitish, tinged with olive gray; bill slender and rather short; bristles at its base; plumage loose and tufty; 4th primary longest; the first very short; legs rather long, tarsus slender. Length 4; spread 7.—*Audubon*.

HISTORY.—This is an active little bird, and is often seen in company with the creepers and titmice, searching for flies and insects. It is put down by Dr. Brewer as breeding in this state. Audubon found it rearing its young in Labrador.

GENUS TROGLODYTES.—Cuvier.

Generic Characters.—Bill slender, subulate, somewhat arched and elongated, also acute, compressed, and without notch; mandibles equal. Nostrils basal, oval, half closed by a membrane. Tongue slender, the tip divided into 2 or 3 small bristles. Feet slender; tarsus longer than the middle toe; inner toe free; posterior with a larger nail than the rest. Wings short, concave and rounded, 3d, 4th, and 5th primaries longest.



THE HOUSE WREN.

Troglodytes aedon.—VIEILLLOT.

DESCRIPTION.—Color above reddish-brown, darkest on the head and neck, lighter towards the rump, feathers mostly barred with dusky; beneath dull pale gray, nearly white on the belly; sides and under tail coverts barred with brown; a yellowish line from the upper mandible over the eye; cheeks yellowish gray, spotted with brownish red; bill dark brown above, lighter beneath; iris hazel; feet flesh color; wings short, 3d and 4th quills longest; tail rather long. Length 4½, spread 5½.

HISTORY.—This familiar and interesting little bird is common in all parts of the United States, from April until the beginning of October, when it retires to the south: but the place where it winters seems yet to remain unknown. The House Wren is sprightly, active and diligent, and has received its name in consequence of its delighting to make its residence in our orchards, gardens, and about our houses. Its nest is formed with coarse sticks, shreds of bark, hair, &c., in some natural or artificial cavity, such as a hollow stump, or post, or the vacant space at the foot of a brace in the frame of a building, or a box provided for it by the gardener. And whatever the cavity selected, it seems to be its object to fill it with sticks and other articles, leaving room only for itself and young. The eggs, from 6 to 8, are of a reddish flesh-color, sprinkled with reddish-brown. Audubon has represented this wren as feeding its young in a nest constructed in an old hat. The Wren manifests great antipathy to the cat, and will scold her till she is out of sight.

THE WINTER WREN.

Troglodytes hyemalis.—VIEILLLOT.

DESCRIPTION.—Dark brown above, crossed with transverse dusky touches, except on the head and neck, which are plain; the black spots on the back terminate in minute points of dull white; the same colored points are seen on the first row of

THE WOOD WREN.

GENUS SIALIA.

THE BLUE BIRD.

wing-coverts; the primaries are crossed by alternate rows of cream color; throat, line over the eye, sides of the neck and breast dirty white, with minute transverse touches of drab; belly and vent mottled with sooty black, deep brown, and white, in bars; tail very short; legs and feet pale clay-color; bill straight, half an inch long, dark brown above, whitish beneath; iris hazel. Length $3\frac{1}{2}$, spread 5.—*Mitt.*

HISTORY.—This sprightly and musical little bird bears a very strong resemblance to the preceding, and might easily be mistaken for it. It may, however, be distinguished by its shorter tail, more slender bill, and by having the under parts more distinctly barred. The nest of this wren is built upon, or very near the ground, at the foot of a tree, or by the side of a rock. It is formed of moss and leaves, and lined with hair, and has its entrance on the side. This bird is said to lay from 10 to 18 eggs, but the nests, discovered by Audubon, contained no more than 6. Their color is light blue, spotted with reddish brown. The song of this wren is very agreeable and loud for the size of the bird.

THE WOOD WREN.

Tragelaphus americanus.—*Aud.*

DESCRIPTION.—Bill of moderate length, nearly straight, slender, acute, neck short; body rather full; plumage soft, blended, slightly glossed; wings short, broad; 4th and 5th quills longest; tail rather long, graduated; general color above dark reddish brown, duller and tinged with gray on the head, indistinctly barred with dark brown; wings and tail waved with dark brown, edges of the outer primaries lighter; under parts pale brownish gray, barred more or less distinctly. Length $4\frac{1}{2}$, spread $6\frac{1}{2}$.—*Aud.*

HISTORY.—This new species was discovered by Audubon in the summer of 1832, in the state of Maine, where it breeds in hollow logs in the woods, seldom if ever making its appearance in cleared land. The color of the egg of the Wood Wren is dull yellowish white, with blotches and streaks of purplish-red and blackish-brown. This wren breeds in Vermont, and Audubon describes an egg procured in this state by Dr. Brewer. Late in the fall of 1840, I saw a pair of these wrens in a little wood in Burlington, and watched them for some time. They were silent except a low chirp occasionally, and were intently and diligently searching for spiders and insects upon the sides and beneath the logs.

GENUS SIALIA.—*Swinson*

Generic Characters.—Bill of ordinary length, nearly straight, about as broad as high at the base; upper mandible rounded carinated towards the base, notched and curved at the tip; tongue cartilaginous, shortly lacerate at the base, and emarginate at the point; nostrils basal, open, partly obstructed by an internal tubercle, the nasal fossae extensive and depressed; tarsus rather robust, a little shorter than the middle toe; inner toe free; the hind one stoutest, longer than the nail; wings rather long and acute; 1st and 2d primaries longest, the 3d scarcely shorter.



THE BLUE BIRD.

Sialia Wilsonii.—*SWINSON.*

DESCRIPTION.—Color sky-blue above; ferruginous, passing into brownish white, beneath; vent white; wings full and broad; inner vanes of the quills and their shafts dusky, outer vanes blue; bill and legs black; inside of the mouth yellow. Colors of the female duller than in the male. Length $6\frac{1}{2}$, spread $11\frac{1}{2}$.

HISTORY.—This well known and familiar bird is found in all parts of the United States and of the British North American provinces. It is every where a great favorite, and its return in the spring is hailed with hardly less joy than that of the Robin. It seems to delight in being around our dwellings, and rears its young in hollow stumps and posts and in little boxes made for that purpose and placed on upright poles. The nest consists of a slight lining of the cavity with a few straws and feathers. The eggs are usually 5, of a pale blue color and without spots. They often raise two or three broods in a season. Their food consists almost entirely of insects, such as beetles, spiders and grasshoppers, and, on account of their destruction of these, they are, like most others, real benefactors of the farmer, and richly deserve his protection. Birds seem to be specially designed by Providence to prevent the undue increase of noxious insects, and so useful are they that, in general, whoever destroys a bird, destroys a friend. Blue Birds are very common in all parts of Vermont, and their

THE BROWN LARK.

GRANIVOROUS BIRDS.

THE SNOW BUNTING.

agreeable warble is heard from March till October.

GENUS ANTHUS.—*Linnaeus*.

Generic Characters.—Bill straight, slender, cylindric, and subulate towards the point, with edges somewhat inflected towards the middle, and at the base destitute of bristles; the base of the upper mandible carinated, with the point slightly notched and declining. Nostrils basal, lateral, half closed by a membrane. Feet slender; tarsus longer than the middle toe; inner toe free; hind toe shortest, with the nail generally long and nearly straight; wings moderate; three first primaries longest; secondaries notched at the tip; two of the scapulars nearly equal to the longest primaries; tail rather long and emarginate.

THE BROWN LARK.

Anthus spinoletta.—*BONAP.*

DESCRIPTION.—Grayish brown above, with a darker shade in the centre of each feather; beneath and line over the eye, white; breast and flanks spotted with grayish brown, or blackish; tail feathers nearly black, the outer one half white, upon the 2d and often upon the 3d, a conic white spot; lower mandible straight and livid, the upper blackish; legs chestnut; iris hazel. *Female* more spotted below. *Young* dark brown, inclining to olive; strongly spotted on the breast.—*Nutt.*

HISTORY.—The Brown Lark is met with in every part of the United States as a bird of passage. It feeds upon insects and seeds, and may often be seen running along the margin of ponds and streams, and in old fields in pursuit of these. It was found by Audubon breeding abundantly on the coast of Labrador, and Dr. Brewer obtained its eggs from Coventry, (now Orleans), in this state. The nest is placed at the foot of a wall or rock, curiously formed of bent grass, and partly buried in dark mould. The eggs are usually 6. Their ground color is a deep reddish chestnut, darkened by numerous dots, and various lines of reddish brown. This bird is also called the American Petit, or *Titlark*.

GRANIVOROUS BIRDS.

The Birds of this order have a strong, short, thick, and more or less conic bill, which extends back upon the forehead. The ridge of the upper mandible is usually somewhat flattened, and both portions of the bill are generally without the toothed notch. The feet are arranged with 3 toes before and 1 behind. The wings are of moderate dimensions. These birds spend the summer in pairs, but assemble

together in the fall and migrate in large flocks.

GENUS EMBERIZA.—*Linnaeus*.

Generic Characters.—Bill short, robust, conic, somewhat compressed, and without notch; the margins contracted inward, a little angular towards the base; the upper mandible rounded above, acute, smaller and narrower than the lower; the palate with a longitudinal bony tubercle; the lower mandible rounded beneath, and very acute. Nostrils basal, small, partly covered by the feathers of the forehead. Tarsus about equal to the middle toe; the lateral toes equal; outer united at the base to the middle toe. Wings with the 1st primary almost equal to the 2d and 3d, which are longest. Tail even or emarginate.

THE SNOW BUNTING.

Emberiza nivalis.—*LINNAEUS*.

Plectrophanes nivalis.—*Aud. Am. Birds, III—35*
pl. 155.

DESCRIPTION.—*Male*, in winter, with the head, neck, lower parts, a great proportion of the wings, including the smaller coverts, secondary coverts, several secondary quills, the bases of the primaries and their coverts, and the greater part of the outer tail feathers on each side, white; the head and hind neck more or less tinged with brownish red; the upper parts reddish gray, or yellowish red mottled with black, the concealed part of the plumage being of the latter color; the bill brownish yellow. *Female*, in the winter, with the white less extended. *Young*, at this season, like the female, but browner. *Male*, in summer, with the back, scapulars, inner secondaries, terminal portion of the primaries, and 4 middle tail feathers deep black; all the other parts pure white; bill black. *Female* with the black parts tinged with brown, and more or less reddish brown on the head and rump. Length 7; spread 13.—*Audubon*.

HISTORY.—The Snow Buntings spend the great part of the year in high northern latitudes. They breed, according to Dr. Richardson, in the most northerly part of the continent, and on the islands of the arctic ocean. The nest is made of dry grass in the crevices of rocks, and lined with deer's hair and feathers. The eggs are greenish white, spotted and blotched with umber. They usually make their appearance in Vermont in December, in the midst of storms of snow. They arrive in flocks, frequently in company with the Tree Sparrow and Blue Snow Bird, and, in descending upon our gardens and fields, to collect their scanty pittance of seeds from the dry weeds which rise above the snow, they always come down in a

THE BAY WINGED AND SAVANNAH BUNTINGS.

THE SONG SPARROW.

spiral direction, passing several times around the spot on which they are to alight. They are much more plentiful in some winters than in others, and are generally known by the name of *White Snow Bird*.

THE BAY-WINGED BUNTING.

Emberiza graminea.—Gmel.

DESCRIPTION.—General color of the upper parts light brown, streaked and mottled with darker; lesser wing-coverts reddish-brown; first quills margined externally with white; outer tail feathers marked with an oblique band of white; a narrow circle of white round the eye; throat and breast yellowish white; the latter and fore part of the cheeks streaked with dark brown; sides and belly yellowish brown, fading into white towards the tail, and sparsely streaked with dark brown; wings with the 3d and 4th quills longest; plumage compact; tail rather long; tarsus, toes, and claws flesh color. Length 5½, spread 10.—*Aud.*

HISTORY.—The Bay-Winged Bunting, or Finch, is found in all the northeastern portion of the United States. I learn from Dr. Brewer that it breeds in Vermont as well as other parts of New England, and that its nest is placed upon the ground without concealment, but that it uses much art in decoying enemies from the neighborhood of it.

THE SAVANNAH BUNTING.

Emberiza savanna.—Wils.

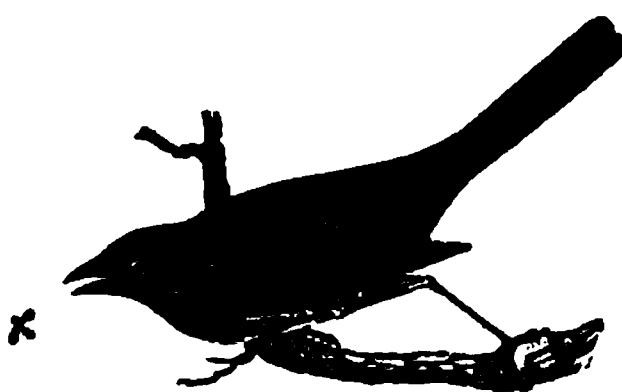
DESCRIPTION.—General color above pale reddish brown, spotted with brownish black; the edges of the feathers being of the former color; lower parts white, the breast spotted and the sides streaked with deep brown; cheeks and space over the eye light citron yellow; bill dusky above, pale brown beneath; wings and tail short, the latter emarginate; head rather large; neck short. Length 5½, spread 8½.—*Aud.*

HISTORY.—The Savannah Bunting, or Savannah Finch, as he is also called, is, according to Audubon, one of the most abundant and hardy species in the United States. It breeds in this state, and constructs its nest very much in the manner of the Song Sparrow, at the foot of a tuft of grass, or in a low bush. The eggs, from 4 to 6, are of a pale bluish color, softly mottled with purplish brown.

Genus Fringilla.—LINNÆUS.

Generic Characters.—Bill short, robust, conic on all sides and generally without a notch; upper mandible wider than the lower, somewhat

turgid and a little bent at the tip, without keel, depressed at the upper part, and often prolonged into an angle entering the feathers of the forehead; nostrils basal, round, covered by the feathers; tongue thick, acute compressed and bifid at the tip; tarsus shorter than the middle toe; toes disconnected at the base; hind nail largest. Wings short; 1st and 2nd primaries but little shorter than the 3d and 4th, which are longest.



THE SONG SPARROW.

Fringilla melodia.—Wils.

DESCRIPTION.—Crown brownish chestnut, divided longitudinally by a grayish line; line over the eye light ash, becoming white towards the bill; mottled above and below with brown, chestnut and ash; much lightest on the belly, each feather being marked with brown along the middle, surrounded by chestnut and edged with ash, giving the bird a striped appearance, particularly on the back and lower part of the breast; wings and tail chestnut brown; bill dark horn color, lighter below; legs light flesh-colored; feet and nails dusky. Length 6½ inches; spread of the wings 8½ inches. Tail wedge-form, 2 inches longer than the folded wings; 1st primary short, 3d and 4th longest.

HISTORY.—This is one of our most common and familiar sparrows. It arrives early from the south, and in company with the Blue Bird and Robin, ushers in the spring with its cheerful notes, while the snows are yet lingering upon the ground. This sparrow breeds in all parts of the United States and Canada. The nest is usually placed upon the ground but is sometimes a little elevated above it in a low bush. It is usually formed of dry grass and lined with hair. The eggs, usually 5, are of a bluish gray color, thickly spotted with different shades of brown. They are very prolific, frequently raising three broods in a year. The Song Sparrow is common in our gardens, orchards and meadows, preferring the open fields and low bushes to the woods. They feed upon worms, insects, larvæ and seeds.

* For the time of their appearance see Part I—13.

THE BLUE SNOW BIRD.

THE BLUE SNOW-BIRD.

Fringilla hyemalis.—LINNÆUS.

DESCRIPTION.—General color dark brownish ash, or bluish slate above and on the breast; belly white; feathers on the back slightly tinged with ferruginous; wings and central tail feathers dark slate; outer tail feather on each side pure white, and the next white wholly or in part; tail forked, the lateral feathers curving outward towards the tip; bill short, acute; bill, legs and feet brownish in summer, pale flesh-color in winter; claws slender and compressed. *Female* and *young* tinged with brown. Length 6 inches, spread of the wings 9 inches.

HISTORY.—This is one of our most common and numerous species, and in the spring and autumn they are met with in every part of the state. Late in the fall they mostly migrate to the south, and in the early part of summer they mostly retire from the low lands either beyond the limits of the state to the north, or to the central mountainous districts for the purpose of rearing their young. They breed in large numbers in all the mountain towns, through the whole length of the state. The nest is built upon the ground by the side of a rock, stump, tuft of grass, or in the side of a dry bank, and is composed of small sticks and withered grass. The eggs, from 3 to 5, are of a pale green, brushed and spotted with darker. They breed in small numbers in the low lands in this state. I found one of their nests in Burlington, near Winooski river, on the 27th of July, containing 3 young nearly fledged. The most common note of this bird is a sharp *chip*, and hence it is often called the *Chipping Bird*, or Blue Chipping Bird.

THE TREE SPARROW.

Fringilla canadensis.—LATHAM.

DESCRIPTION.—Crown of the head bright bay, slightly mottled with ash color; a stripe over the eye, white at its commencement near the bill, and backwards fading into pale ash; sides of the neck, chin and breast pale ash; on the centre of the breast an obscure dark spot; from the lower angle of the bill and behind the eye proceeds a small stripe of chestnut; back varied with black, bay, brown and drab; wings marked with two white bars; outer feathers edged with white, inner with pale brown; bill black, yellowish beneath; tail forked, feathers black, edged with white; vent white; legs slender, dusky brown; feet black. Length of specimen before me 6 inches; spread 9 inches.

THE TREE AND CHIPPING SPARROWS.

HISTORY.—This beautiful little sparrow is a winter resident in Vermont. It arrives in flocks from the north about the first of November, and proceeds again northerly about the first of April. During the winter these sparrows are often seen in flocks by themselves or in company with the snow buntings, gathering their scanty pittance of seeds from the weeds which rise above the snow in our fields and gardens. They are sometimes seen seeking shelter, in the midst of woods, from the winds and storms. Some of them rear their young in Vermont, but the greater part breed farther north, in the neighborhood of Hudson's Bay. They build their nest among the herbage, with mud and dry grass, and line it with hair or down. They lay 4 or 5 eggs at a litter, which are of a pale brown, spotted with darker color.

THE CHIPPING SPARROW.

Fringilla socialis.—WILS.

DESCRIPTION.—Frontlet nearly black; crown bright chestnut; back varied with brownish-black, ash and bay; wings and tail dark chestnut brown; line over the eye, chin and vent white; breast and sides of the neck pale ash; rump dark ash; bill blackish above, dark flesh-color below; legs and feet slender, pale flesh-color; hind nail a little shorter than the toe; first four primaries nearly equal; tail forked, reaching $1\frac{1}{2}$ inch beyond the folded wings. Length 5 inches, spread of the wings $7\frac{1}{2}$ inches.

HISTORY.—Of all our sparrows this is the most familiar and most common. It breeds abundantly in every part of the state, and seems to take much pains to place its nest as near as possible to our dwellings, or close by the side of the most frequented walks in our yards and gardens. Sometimes it is placed upon a lilach or other shrub so near to a window as to be easily reached with the hand. The female will sit upon her nest with apparent unconcern while people are almost constantly passing and repassing within 2 or 3 feet of her. The nest is rather slight, and always composed, internally, of hair, and hence it is often called the *Hair Bird*. The eggs, 4 or 5, are bright greenish blue, with a few spots of brown of different shades. They usually raise two or three broods in a season.

THE FIELD, OR RUSH SPARROW.

Fringilla junco.—NUTT.

DESCRIPTION.—Above varied with bay, drab and dusky; crown chestnut; cheeks

SWAMP SPARROW.

YELLOW BIRD.—PINE LINNET.

LESSER RED-POLL.

throat and breast pale brownish drab; belly and vent white; tail dusky, forked and edged with whitish; bill and legs reddish cinnamon color; hind nail as long as the toe; the 3d primary longest, the 1st shorter than the 6th. Length 5½ in.—Nutt.

HISTORY.—This species very much resembles the Chipping Sparrow, but the bay above is brighter, and the tail proportionably longer. It builds its nest of dried grass, upon the ground, in the shelter of a low bush or grassy tuft. The eggs are so thickly sprinkled with ferruginous as to appear almost wholly of that color.

THE SWAMP SPARROW.

Fringilla palustris.—WILS.

DESCRIPTION.—Blackish brown above, belly white; crown bright bay, undivided, bordered with blackish; line over the eye, sides of the neck, and breast ash color; wings and tail dusky, the primaries edged with brownish white, the secondaries with bay; bill dusky; iris hazel; legs stout and long, and with the feet pale brownish horn color. Young spotted with black and olive brown. Length 6; spread 8.—Nuttall.

HISTORY.—This species is aquatic in its habits, and resides principally in low wet lands and swamps, and hence its name, *Swamp Sparrow*. It arrives from the south in April, and builds its nest in a tuft of rank grass in the midst of a marsh. The eggs are 4 or 5, of a dirty white color, spotted with reddish brown.

YELLOW BIRD, OR AMERICAN GOLD FINCH.

Fringilla tristis.—LINNÆUS.

DESCRIPTION.—General color of the male, in summer, rich gamboge yellow, fading into white towards the tail; crown and frontlet black; wings and tail black, varied with white; smaller wing feathers and coverts tipped and edged with white; tail sharply forked, with the feathers acutely pointed, and shaded off into white on their inner webs towards the tips; bill conical, acute, brownish yellow, and the gap straight; legs, feet and claws slender, and of a yellowish brown color. Female, young, and male, in autumn, brownish olive above, yellowish white beneath. Length 5 in.; spread 8. Four first primaries nearly equal.

HISTORY.—The Yellow Bird, or American Gold Finch, is common in summer from tropical America to the 50th parallel of north latitude. It arrives in Vermont later than several of the other sparrows, and is later in rearing its young. It

seldom builds its nest till some time in July, and is less disposed to build in the immediate vicinity of our dwellings than several others of the family. The nest is usually placed in the top of a young forest tree, from 15 to 30 feet from the ground, and is composed of the dry bark of herbaceous plants, thickly bedded with cotton-like down of the Canada thistle. The eggs, 4 or 5, are white and without spots. This bird seems to be extremely fond of the seeds of the thistle, and of other compound flowers; and it often visits our gardens for the purpose of feeding upon lettuce and flower seeds. They soon become reconciled to the cage, and their song is nearly as sonorous and animated as that of the Canary Bird.

THE PINE LINNET.

Fringilla pinus.—WILSON.

DESCRIPTION.—Color dark flaxen, spotted with blackish; wings black, with two yellowish white bars; quill shafts and lateral tail feathers on the lower half yellow; rump, breast and sides spotted and streaked with blackish brown; bill dull horn color; legs purplish brown; iris hazel. Length 4½; spread 8½.

HISTORY.—The Pine Linnet passes most of the year to the northward of the United States; but, in the depth of winter, often makes its appearance here and in states still further south. Of its history we know very little.

THE LESSER RED-POLL.

Fringilla linaria.—LINNÆUS.

DESCRIPTION.—General color of the upper plumage yellowish gray, darkly streaked with blackish brown; wings and tail feathers blackish, slightly edged with white, with two narrow yellowish white bars on each wing; crown bright deep crimson, with a crimson tinge on the rump and sides of the throat; a brownish black band around the base of the bill, and reaching down upon the throat; belly bluish white, spotted and striped with brown upon the sides and beneath the tail; feathers on the thighs yellowish brown. Bill slender, straight, acutely pointed, yellowish on the sides, and brown above and below towards the tip; wings long, the three first quills longest, and nearly equal; tail sharply forked; legs, feet and claws black; claws slender, curved, acute, the hind one much the longest. Length of the specimen before me 5½ inches; tail 2½; folded wing 3.

HISTORY.—This elegant species is seldom seen among us, excepting in the

THE FINCHES.

THE FINCHES.

winter, when they often appear in large flocks. They breed, according to Audubon, in Maine, Nova Scotia, and Labrador, and a few probably rear their young in this state. Dr. Richardson says that it is a permanent resident of the fur countries, where it may be seen in the coldest weather. Its nest resembles that of the Yellow Bird. The eggs, usually 5, are bluish green, spotted with reddish brown towards the large end.

THE FERRUGINOUS FINCH.

Fringilla iliaca.—MERREM.

DESCRIPTION.—Above varied with reddish brown and gray; beneath white, largely spotted with bright bay and dusky; head and neck cinereous, the feathers margined with ferruginous; wings and tail rust color, inclined to reddish brown; 1st and 2d row of wing-coverts tipped with white; bill stout, dusky above; iris hazel. Length 6, spread 9½.—Nutt.

HISTORY.—Most of this species spend the summer to the northward of the United States, and appear among us only during their spring and fall migrations. Some few of them, however, breed in the northern states, and I am informed by Dr. Brewer that they rear their young in the north part of this state. They build their nest upon the ground, and their eggs, 4 or 5, are of a dull greenish hue, irregularly blotched with brown.

WHITE-THROATED FINCH.

Fringilla pennsylvanica.—LATH.

DESCRIPTION.—The head striped with dusky and white; a yellow line from the nostril to the eye; upper parts varied with dusky, bay and light brown; shoulder of the wing edged with greenish yellow; cheeks and breast cinereous; throat and belly white; legs pale flesh-color; bill bluish horn-color; iris hazel. Female below, and stripes on the head, light drab. Length 7, spread 9½.—Nutt.

HISTORY.—This large and handsome Finch, or Sparrow, spends the winter, in large numbers, in the southern states, but, on the approach of spring, proceed to the north and rear their young throughout the whole region, from New England to the Fur Countries about Hudson's Bay. A few of them breed in the north part of Vermont. Their nest is built upon the ground, made of grass, and lined with hair and feathers. The eggs are pale green, marbled with reddish brown.

WHITE-CROWNED FINCH.

Fringilla leucophrys.—TEMN.

DESCRIPTION.—Crown white, line surrounding it and through each eye black; back streaked with dark rusty brown and pale bluish white; wings dusky, with two white bands; tertials black; rump and tail coverts drab; chin and belly whitish; vent pale ochreous; tail long, rounded, dusky, broadly edged with drab; bill, legs and feet cinnamon brown. Female with the colors duller. Length 7½, spread 10.—Nutt.

HISTORY.—This species is seen here only during its spring and fall migrations. Audubon informs us that it breeds in Newfoundland, Labrador and still further north. Their nest is built upon the ground, made of moss and lined with hair. The eggs, usually 5, are of a sea-green color, mottled and blotched with different shades of brown.

ARCTIC GROUND FINCH.

Fringilla arctica.—SWAIN.

DESCRIPTION.—The head, neck above and below, scapulars, all the wing coverts and tail pitch black; some of the breast feathers fringed with white; back scapulars, and wing coverts striped or tipped with white; quills hair brown; middle of the breast and belly pure white; sides, flanks and under tail coverts deep and bright ferruginous; bill black; legs pale brown. Female with upper plumage ferruginous-brown. Length 8½, tail 4.—Nutt.

HISTORY.—This species is migratory, spending the summer and rearing its young in the Fur Countries, and retiring in the winter to warmer regions. Dr. Brewer informs me that it breeds also about Coventry, (now Orleans,) in this state. The nest is made of grass and leaves upon the ground, and the eggs, 4 or 5, are white, spotted with reddish chocolate.

TOWHE-GROUND FINCH.

Fringilla erythrophthalma.—LINN.

DESCRIPTION.—Upper parts black; belly white; flanks and vent bay; tail rounded, 4 outer feathers partly white; a white spot on the wing below the coverts and an interrupted white margin on the primaries; bill black. Female olive brown where the male is black, the head and throat inclining to chestnut; 3 only of the lateral tail feathers marked with white. Length 8, spread 11.—Nutt.

HISTORY.—This common bird derives

THE PURPLE LINNET.

THE PINE GROSBEEK.

THE COMMON CROSS-BILL.

its name *Tow-ke* from the sound of its note, when calling to its mate. It is found in all parts of the United States and Canada, but retires to the southern states to pass the winter. This bird breeds in Vermont. Its nest is built upon the ground, and the eggs, from 4 to 6, are white, tinged with flesh-color, and spotted with reddish brown.

THE PURPLE LINNET.

Fringilla purpurea.—Gmelin.

DESCRIPTION.—Head, breast and rump deep rich lake, approaching to crimson, and fading into rose color on the belly; feathers on the back brownish lake fringed with ash, producing a spotted appearance; vent and under tail coverts white; wings and tail dusky, edged with reddish white; bill grayish, dark horn color, having a fringe of cream-colored feathers at the base; tail forked; legs and claws brown; head and neck rather large; outline of each mandible a little convex; nostrils nearly concealed by the feathers. *Female* and young brownish above, and yellowish white beneath, without the crimson. Second and third primaries longest; 1st and 4th a little shorter. Length 6 inches, spread of the wings 9 inches.

HISTORY.—This beautiful and cheerful little songster arrives from the south about the beginning of April, and continues till October. Although the greater part of them proceed still further north to spend the summer, considerable numbers of them are known to rear their young in this state. Their nest is usually built upon a cedar, a fir or other evergreen, and is described by Dr. Brewer as being rudely made of grass and weeds, and lined with roots. The eggs are bright emerald green. These birds are often tamed and kept in cages, where they sing very pleasantly.

GENUS PYRRHULA.—Brisson.

Generic Characters.—Bill short, robust, thick, convex-conic, turgid at the sides, compressed at the point, the upper mandible acute, and obviously curved, as well as the inferior more or less; palate smooth and scooped; nostrils basal, lateral, rounded and most commonly concealed by the feathers; tongue thick and somewhat fleshy; tarsus shorter than the middle toe, which is united at the base to the outer; wings rather short; the 3 first primaries graduated, the 4th longest; tail square or slightly rounded. *Female* differs considerably from the male. They moult generally twice in a year.

THE PINE GROSBEEK.

Pyrrhula enucleator.—Temm.

DESCRIPTION.—General color red; wings and tail dark cinereous, wing coverts forming two white bands; quills, lesser coverts and tail-feathers tinged with crimson; under plumage more red than the upper, except the middle of the belly, vent and tail coverts, which are bluish-gray; bill blackish brown; legs black. Tail broad and forked; 1st quill slightly shorter than the 2d, which hardly exceeds the 3d. Length $11\frac{1}{2}$, tail $4\frac{1}{2}$, wing $4\frac{3}{4}$.—*Richardson*. Length given by Audubon, $8\frac{1}{2}$; by Nuttall, 9.

HISTORY.—The Pine Grosbeak, or Bull Finch, inhabits the northern parts of both continents, and, according to Audubon, is a constant resident in the state of Maine, and to the northward to Hudson's Bay, where it builds its nest upon small trees, and feeds upon the seeds of the white spruce and other trees. They are seen in most parts of the United States only in the winter.

GENUS LOXIA.—Brisson.

Generic Characters.—Bill robust and convex, with the mandibles crossing each other, and compressed towards the points, which are extended in the form of crescents. Nostrils basal, lateral, rounded, hidden by the advancing hairs of the front. Tongue cartilaginous, short, entire and pointed. Tarsus nearly equal to the middle toe; toes divided to the base; hind nail largest, much curved. Wings moderate, 1st and 2d primaries longest. Tail notched. *Female* and young differ from the adult male.

THE COMMON CROSS-BILL.

Loxia curvirostra.—Linn.

DESCRIPTION.—General color dull light red inclining to vermilion, darker on the wings, with quills and tail feathers brownish black; lower parts paler, nearly white on the belly; plumage blended, but firm; tail short, small, emarginate. *Female* with the upper parts grayish-brown tinged with green, the rump dull grayish yellow. *Young* with the colors duller and more inclining to yellowish green. Length 7, spread 10.—*Aud.*

HISTORY.—This species is quite common in this state and to the northward of it, but further south is seldom seen, except in the winter. It feeds principally upon the seeds of the different kinds of pines and spruces, and its crossed mandibles are peculiarly fitted for extracting them from the cones. This bird breeds in Vermont, and its egg was obtained by

WHITE WINGED CROSS-BILL.

YELLOW BILLED CUCKOO.

BLACK BILLED CUCKOO.

Dr. Brewer from Coventry (now Orleans,) in this state. Its color is greenish white, thickly covered, more especially towards the large end, with very brown spots. They are said to breed in winter, and to have their nests in pines, spruces and firs.

WHITE WINGED CROSS-BILL.

Loxia leucoptera — Gmel.

DESCRIPTION.—General color of the male rich carmine, inclining to crimson, dusky on the middle of the back; scapulars, wings, tail and upper tail coverts, black; two broad bands of white on the wings; sides brownish streaked with dusky; wings pointed, 3 outer primaries longest; tail emarginate. *Female* with the upper parts dusky, the feathers margined with grayish-yellow; rump, breast and lower parts yellow, streaked with dusky. Length $6\frac{1}{2}$, spread $10\frac{1}{2}$.—Aud.

HISTORY.—The White Winged Cross-Bill resides mostly to the northward of the United States, and comes hither in flocks during the winter. They are, however, according to Audubon, not uncommon in New Jersey and Pennsylvania, where a few of them breed. Mr. Hutchins says that this migratory species reaches Hudson's bay in March, where it breeds, making its nest of grass, mud and feathers, in pine trees, and laying 5 white eggs marked with yellowish spots.

YOKED-TOED BIRDS.

In this order the form of the bill is various, but in general more or less arched and hooked. The toes are always in pairs directed two backward and two forward, and hence they received the name *Zygodactyli*, or yoked-toed. The hind exterior toe is, however, often reversible.

GENUS COCCYZUS.—Vieillot.

Generic Characters.—Bill strong, compressed with a distinct ridge and slightly bent from its base; under mandible straight, sloping at the tip; nostrils basal half covered by a naked membrane; tongue short, narrow and acute; tarsus naked, longer, or about the length of the longest toe; two anterior toes united at the base; nails short and but little curved; wings rather short; 3d and 4th primaries longest.

YELLOW BILLED CUCKOO.

Coccyzus americanus.—Bonaparte.

DESCRIPTION.—Color above dark grayish-brown, with greenish and yellowish silky reflections; tail long, the two mid-

dle feathers the color of the back; the others dusky gradually shortening to the outer ones, with large white tips, the two outer scarcely half the length of the middle ones; below white; feathers of the thighs large and hiding the knees as in the hawks; legs and feet pale greenish-blue; iris hazel; lower mandible and lower part of the upper mandible yellow. *Female*, with the 4 middle tail-feathers without white spots. Length 12, spread 16.—Nutt.

HISTORY.—The Yellow-billed Cuckoo, returns from the south about the first of May and is much oftener heard than seen, as it keeps itself for the most part concealed in the thick tops of trees and bushes. It breeds in the southern part of the state. Its nest is placed on the horizontal branch of a small tree, and is very slovenly put together. The eggs, from 2 to 4, are of a pale bluish green color. This cuckoo destroys many caterpillars, beetles and other insects, but he gets a share of his living less creditably by sucking the eggs of other small birds. His note is coarse and unpleasant. The cry of this bird has been thought to presage rain, and hence it is sometimes called the *Rain-Crow*.

THE BLACK-BILLED CUCKOO.

Coccyzus dominicus.—Nuttall.

DESCRIPTION.—General color above light hair brown with glossy bronze reflections; beneath white approaching to brownish ash on the throat, breast and towards the tail; tail feathers, excepting the two middle ones, tipped with white; a naked space of a bright brick red color around the eye; bill as long as the head, compressed laterally, arched and acute; upper mandible brownish black; lower, bluish; tarsus and feet bluish and scutilated; nostrils basal, lateral and partly closed by a membrane; legs rather short; body slender; tail long, graduated, consisting of 10 feathers. Length of the specimen before me $11\frac{1}{2}$ inches; folded wing $5\frac{1}{4}$; tail 6, and reaching $3\frac{1}{4}$ beyond the folded wing; gape 1.2, bill above .9.

HISTORY.—This species is believed to be more common in Vermont than the preceding, but resembles it in appearance and mode of living. It, however, arrives later and passes the breeding season more in the woods. Their nests are made of twigs and lined with moss, but are very flat and shallow. The eggs, from 3 to 5, are of a bluish green color, and smaller than those of the preceding species.

GOLDEN-WINGED WOODPECKER.

RED-HEADED WOODPECKER.

GENUS *PICUS*.—*Linnaeus*.

Generic Characters.—Bill large or moderate, usually straight, pyramidal, compressed, xaneate, and edged like scissors towards the point; nostrils basal, oval, open, partly concealed by bristly feathers at the base of the bill; tongue long, extensile and vermiform; legs strong; feet robust, suited for climbing; two toes before, united at the base, and usually two behind, divided; 1st primary very short, 3d and 4th longest; tail cuneiform, with 12 feathers, the lateral ones being very short.

The Woodpeckers resemble one another in their habits and manner of life. Their nests are in excavations in old trees, and the young of most of the species emit a rank disagreeable odor. They do some injury by pecking holes in the bark of our fruit trees, in the pursuit of their favorite food; but it is trifling compared with the service which they render by the destruction of eggs, larvae and insects.



GOLDEN-WINGED WOODPECKER.

Picus auratus.—*Linnaeus*.

DESCRIPTION.—Upper plumage amber brown barred transversely with black; upper part of the head cinereous with a crimson red crescent behind; cheeks and throat bright cinnamon color; from the lower mandible descends a stripe of black to the throat; a black crescent on the breast; under plumage generally yellowish white, beautifully spotted with black, the spots circular on the breast, and hastate or heart-form towards the tail; under side of the wings and tail and the shafts of most of the larger feathers, saffron yellow; rump white; tail coverts white, notched and banded with black; tail black above with some of the feathers slightly edged and tipped with yellowish white; bill bluish black; legs grayish blue; iris dark hazel. Length 11½ inches; spread 19; length of the bill 1½.

HISTORY.—This is our largest, and one

of our most common Woodpeckers. It is known by several names, such as Flicker, Yellow Hammer, and Partridge Woodpecker. This Woodpecker spends the winter in the southern states, and returns some time in April. Their nest is made by excavating a cavity in an old tree with their bill, and they have been known in this way to make a winding borough in solid oak, 15 inches in length. The eggs, usually 6, are pure white.

RED-HEADED WOODPECKER.

Picus erythrocephalus.—*Linnaeus*.

DESCRIPTION.—Color of the head, neck and throat rich crimson; fore part of the back, scapulars and wing coverts bluish black; greater quills, anterior border of the wings, and tail pitch black; secondaries, rump and all the under parts of the body white; tail forked, several feathers tipped, and the two outer ones edged with white; shafts of the secondaries black; bill greenish blue, darker towards the tip, stout and slightly arched; iris yellowish brown. Colors of the female dull. Head and neck of the young grayish. Length 9, spread 16; 3d primary longest.

HISTORY.—The Red-Headed Woodpecker, although at present by no means rare in Vermont, is much less common than formerly. They pass the winter in the southern states, and return in the early part of May. Their migrations, according to Audubon, are performed in the night. They are remarkably fond of sweet apples, and are often seen in orchards. Their nest is excavated in the trunk or large limb of an old dead tree. The eggs are about 6, white and marked with reddish spots at the large end.

YELLOW BELLIED WOODPECKER.

Picus varius.—*Wilson*.

DESCRIPTION.—Color varied with black, white, yellow and crimson; fore part of the head and throat crimson; back mottled with black, white and pale yellow; wings black, with most of the feathers spotted and tipped with white; tail mostly black, with the two central feathers white, spotted with black on their inner webs, and some of the outer ones tipped with yellow; breast and belly light yellow; sides under the wings dusky yellow, spotted longitudinally with black; legs and feet dusky blue, inclining to green; feet four toed; bill blackish horn color, long and stout. Female, with the throat and back of the head whitish; young with a broad white band across the wings, and nearly without yellow on the back. Length 8; spread 14.

THE WOODPECKERS.

THE WOODPECKERS.

HISTORY.—This species is common throughout the continent, from the tropic to the 53d degree of north latitude. During the summer they confine themselves principally to the forests, where they rear their young in cavities excavated in old trees. Their eggs are white, and usually 4 or more. The cavity in which they rear their young is often excavated to the depth of from 15 to 24 inches in the solid wood.

THE HAIRY WOODPECKER.

Picus villosus.—LINNÆUS.

DESCRIPTION.—Color varied with black and white above; wholly white beneath; back clothed with long, loose, downy feathers; wings brownish black, thickly spotted with white; tail pointed, forked, outer feathers white, with an umber tinge at the extremity, second feather on each side black at the lower part, central and longest feathers pitch black; the crown, a stripe down the back of the neck, and a spot on each side of the head back of the eye, black; occipital band red in the male and black in the female; bill and claws bluish horn color; bill covered at the base with yellowish white hairy feathers, black at their extremity. Length 9; spread 15.

HISTORY.—This species is spread very extensively over the country, and in this state is much more common than the preceding, being often seen in the open fields and upon our orchard and shade trees. Its nest is constructed in the manner of the preceding species, and it lays about 5 white eggs.

THE DOWNY WOODPECKER.

Picus pubescens.—LINNÆUS.

DESCRIPTION.—Color of the top and sides of the head, wings and middle tail feathers, black; the chin, two stripes along the sides of the head, a stripe down the back, and numerous roundish spots on the wings, pure white; under plumage pale ash gray; outer tail feathers yellowish white, barred with black; feathers long, loose and downy on the back; head of the male crossed by a scarlet band, which is black in the female; nasal feathers tawny white; bill and claws bluish black; legs greenish; four toes on each foot. Total length of the specimen before me 6.2 inches; spread 11 inches; folded wings 4 inches.

HISTORY.—This is our smallest and, by far, our most numerous species of Woodpecker. In color it has a very close resemblance to the preceding, but differs from it very considerably in size. It is a

permanent resident in this state, but as it rears its young for the most part in the forests, it is not much seen during the summer, but on the approach of autumn it makes its appearance upon our orchard and shade trees in considerable numbers. This is one of the most diligent of the feathered tribe, and may be recommended as a pattern of industry and perseverance. So intent is it in searching for eggs, larvae and insects, that it scarcely heeds what is doing around it, and may often be approached so near as almost to be taken into the hand before it will abandon its business.

ARCTIC THREE TOED WOODPECKER.

Picus arcticus.—SWAINSON.

DESCRIPTION.—Back velvet black, with bluish and greenish reflections; crown saffron yellow; 5 rows of white spots on the quills; sides of the neck and under plumage white, thickly barred with black; two middle tail feathers brownish black; outer ones barred with black and tipped with white; bill bluish gray above, whitish beneath; legs lead colored. Length 10½ inches; wings 5.—*Richardson.*

HISTORY.—This large species of Woodpecker is very rare in comparison with the preceding. It is marked in a list kindly furnished me by Dr. Brewer, as breeding in this state, in the vicinity of Burlington. It has usually been confounded by ornithologists with the *Picus tridactylus*, or Common Three-Toed Woodpecker; The hind toe is completely versatile, and may be placed forward perfectly on a level with the others.

SLENDER BILLED BIRDS.

Birds of this order have the bill long, or moderately extended, partly arched and awl-shaped; it is also entire and acute or sometimes wedge-shaped at the extremity. The feet have three toes before and one behind, the outer united at the base to the middle one; hind toe generally long; the nails extended and curved. In their habits and method of running upon the trunks and branches of trees, they bear considerable resemblance to the woodpeckers.

GENUS SITTA.—LINNÆUS.

Generic Characters.—Bill straight, moderate sized conic-awl-shaped, round and sharp edged towards the point; lower mandible usually recurved from the tip; nostrils basal, orbicular, open, half closed by a membrane, and partly hid by the advancing bristly feathers of the face;

THE WHITE-BREASTED AND RED-BELLIED NUTHATCHES.

THE BROWN CREEPER.

tongue short, wide at the base, notched and hard at the tip; feet robust, hind toe stout and long; wings short; tail rather short consisting of 12 feathers. Sexes similar in color.

WHITE-BREASTED NUTHATCH.

Sitta carolinensis.—BRISSON.

DESCRIPTION.—General color dark lead above, grayish white beneath; head and neck black above, white on the sides and beneath; central part of the wing feathers and wing coverts black, edged with lead color or white; ferruginous tinge about the vent; bill bluish black, lighter beneath towards the base, long and straight; upper mandible longest; feet and legs dusky; hind toe stout and long with a large nail; claws all hooked and sharp; 2d 3d and 4th primaries longest and nearly equal. Length $5\frac{1}{2}$ inches; spread 11.

HISTORY.—The White breasted Nuthatch is a permanent resident throughout nearly the whole of North America, and is very common in this state. During the fall and winter they come into our orchards and yards, where their rough *quack*, two or three times repeated, may be often heard as they run around like the Woodpecker upon the trunks of the trees. Early in the spring they retire to the forests, where they rear their young in the hollow of a tree or large limbs. The eggs, usually 5, are of a dull white color, spotted with brown at the large end.

THE RED-BELLIED NUTHATCH.

Sitta canadensis.—LINNÆUS.

DESCRIPTION.—Lead color above, reddish, or rust-color on the belly; head and neck above and line through the eye, black; a white stripe above and below the eye and on the margin of each wing; lateral tail feathers black and white, central ones lead color; feet and legs dusky; hind toe stout and long; bill black, large, long and straight; 3d primary longest, 2nd and 4th nearly as long. Length $4\frac{1}{2}$ inches, spread of the wings 8 inches.

HISTORY.—This species resembles the preceding in general appearance and habits, but is said to have a predilection to pine forests, feeding much upon the oily seeds of evergreens. The flight of the Nuthatches is short, seldom extending farther than from one tree to another; and yet they have great powers of flight, since Audubon saw one come on board his vessel 300 miles from the shore. The specimens from which both preceding descriptions were made were obtained in Burlington.

GENUS CETHIA.—Linnaeus.

Generic Characters.—Bill long, or middling, more or less arched, entire three-sided, compressed, slender and acute; nostrils basal, naked, pierced in grooves, and half closed by a small membrane; tongue acute; feet slender; inner toe free, somewhat shorter than the outer; hind toe longer and more robust; nails much curved, that of the hind toe largest; wings rather short, spurious feathers small; tail of 12 feathers, elastic, ridged, and acuminate. The sexes and young nearly alike.

THE BROWN CREEPER.

Certhia familiaris.—LINNÆUS.

DESCRIPTION.—Color varied with dusky brown, ferruginous, and white above, white beneath; rump bright rust color; tail rusty brown, as long as the body, with the extremity of each feather attenuated to a sharp rigid point, as in woodpeckers; under tail coverts tinged with rusty; 3d and 4th primaries longest, and all the primaries, excepting the two first, with a yellowish white spot near the middle; legs and feet brownish. Length $5\frac{1}{2}$ inches; spread 7 inches.

HISTORY.—This industrious little bird is seldom seen in the summer, on account of its passing that season in the depth of the forests, but on the approach of winter he may be seen upon the trees in more open places, diligently seeking for its food. It very much resembles the smaller Woodpeckers and Nuthatches in its habits, hopping about upon the trunk of the tree, searching every nook and crevice in the bark for spiders, insects, eggs and larvæ. The Brown Creeper breeds in this state, and for this purpose it takes possession of the deserted hole of a squirrel or woodpecker. The nest, according to Audubon, is loosely formed of grasses and lichens, and lined with feathers. The eggs, from 6 to 8, are yellowish white, irregularly marked with red and purplish spots. Nuttall found one of their nests in Roxbury, Ms., upon the ground by the side of a rock, containing 4 young.

GENUS TROCHILUS.—Linnaeus.

Generic Characters.—Bill long, straight, or curved, tubular, very slender, with the base depressed and acuminate; upper mandible nearly enveloping the under one; tongue long, extensible, bifid and tubular; nostrils basal, linear, and covered by a membrane; legs very short; tarsus shorter than the middle toe; fore toes almost wholly divided; wings long and acute; first quill longest.

THE HUMMING BIRD.

THE KING FISHER.



THE COMMON HUMMING-BIRD.

Trochilus colubris.—LINNÆUS.

DESCRIPTION.—The whole upper plumage shining golden green; wings glossed brownish black; tail broad, dusky, outer feathers tipped with white, or rusty white; throat and breast of the male with changeable ruby-colored, greenish and orange reflections; bill black and a little arched; legs and feet dusky black; nails very sharp and hooked. Female and young yellowish white beneath. Length $3\frac{1}{2}$ inches, spread of the wings $4\frac{1}{2}$ inches; length of the bill along the gape 1 inch, nearly.

HISTORY.—Of American Humming-Birds there are said to be upwards of 100 species, but of the very few species which venture beyond the tropics, this is the only one which visits Vermont. It arrives in May, and during the summer is seen in all parts of the state collecting its food, which consists of insects and nectar from the various flowers. While many of them extend their migrations still further north, and rear their young on the very confines of the arctic circle, considerable numbers of them stop by the way, and not a few of them breed in this state. The puny nest, constructed of lichens and down, cemented together with saliva, is placed upon a large branch of an orchard or forest tree, at heights varying from 4 to 40 feet from the ground. The eggs, 2 in number, are white, and the period of incubation 10 days. While rearing its young the Humming-Bird bravely attacks the King Bird and the Martin, and drives them from the neighborhood of its nest.

HALCYONS.

In this order the bill is long, sharp-pointed, almost quadrangular and straight, or slightly curved; feet very short; the tarsus articulated; the middle toe united with the outer, commonly to the second joint, and with the inner toe to the first articulation. The female and young differ but little in color from the adult male.

GENUS *ALCEDO*.—LINNÆUS.

Generic Characters.—Bill long, straight, quadrangular, compressed, and sometimes curved at the point; nostril basal, lateral, oblique, and nearly closed by a naked membrane; tongue short and fleshy; legs and feet short; tarsus shorter than the middle toe; hind nail smallest; wings rather short.



THE BELTED KING FISHER.

Alcedo alcyon.—LINNÆUS.

DESCRIPTION.—General color bluish slate; the primaries, the central parts of the secondaries and of the feathers forming the crest, and the shafts generally of the dorsal plumage, pitch black; a small spot before and another under the eye, spots on the wing and tail feathers and their tips, and all the under plumage, white, except the band around the neck, which is bluish slate; bill straight; claws brownish black; legs small and short. Length 12 inches; spread 20 inches. Female shorter, with some parts ferruginous and more white on the wings.

HISTORY.—The King Fisher is found along the borders of streams and ponds, in all parts of the United States, and is quite common in all parts of this state. It feeds principally upon small fishes, which it takes by darting upon them as they are gliding near the surface of the water. The note of the King Fisher is a rough grating crackle. Its nest is formed by perforating horizontally the side of a steep bank, in the manner of the Bank Swallow. These perforations sometimes extend 5 or 6 feet into the bank, with an enlargement at the extremity for the reception of the nest, which consists only of a few twigs, grass and feathers. The eggs are white, and usually 6 in number. Their period of incubation is 16 days.

THE SWALLOW TRIBE.

The birds belonging to this order have a very short bill, which is much depressed and very wide at the base; upper mandible curved at the point; legs short; three

THE PURPLE MARTIN.

toes before, and one behind which is frequently reversible; nails hooked; wings very long and acute. The sexes and young are nearly alike. They feed on insects, which they catch flying. They migrate to tropical countries to spend the winter.

GENUS *HIRUNDO*.—*Linnaeus*.

Generic Characters.—Bill short, triangular, depressed, wide at the base, and cleft nearly to the eyes; upper mandible notched and a little hooked at the point; coxtrils basal, oblong, partly closed by a membrane and covered by the advancing feathers of the frontlet; tongue short, bifid; tarsus short; toes and claws long and slender, three before and one behind; the exterior united as far as the first joint of the intermediate one; wings long; the first quill longest; tail of 12 feathers, and forked.

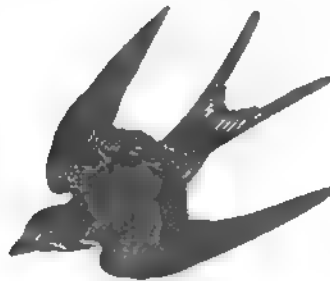
THE PURPLE MARTIN.

Hirundo purpurea.—*Linnaeus*.

DESCRIPTION.—Color of the head, whole body and scapulars black, with a rich glossy shade of bluish purple; wings and tail pitch black, with little gloss; bill, legs and claws black; margins of both mandibles inflexed in the middle; nostrils basal and oval. *Female* brownish black above, with very little of the purple gloss; belly brownish white with hair brown spots; breast brownish gray. Length 8 inches; spread of the wings 16 inches.

HISTORY.—The Purple Martin is the largest of our swallows, and is more intimate with man than any other undomesticated bird. It returns from the south about the last of April, and formerly reared its young in the hollows and excavations in old trees; but since the country has become settled, habitations have been provided for this general favorite in almost every neighborhood, by the erection of martin boxes. Its nest is made of leaves, straw and feathers; and the eggs, from 4 to 6, are pure white and without spots. The Martins have sometimes arrived so early in the spring as to become chilled to death in their houses during a cold storm. This was the case a few years ago in the vicinity of Burlington. The flight of the Martin is very rapid, and, like the redoubtable King Bird, it pursues and boldly attacks eagles, hawks and crows, and drives them from the neighborhood of its dwelling. There is said to be a tradition that the Martin was not seen in New England till about the time of the revolution. It is, however, mentioned by Kalin as being common in New Jersey in 1749. They usually depart to the south about the middle of August

THE BARN AND CLIFF SWALLOWS.



THE BARN SWALLOW.

Hirundo rufa.—*Gmelin*.

DESCRIPTION.—Color above and band on the breast steel-blue; front and beneath chestnut brown, paler on the belly; tail forked, with a white spot on the lateral feathers, the outer ones narrow and an inch and a half longer than the next; legs dark purple; iris hazel. *Female* with belly and vent rufous-white. Length 7, spread 13.

HISTORY.—This swallow is, perhaps, more generally diffused over the state and better known than either of the other species; but it would seem that their numbers have rather been diminishing for several years past in this state, while those of the Cliff Swallow have been vastly multiplied. This swallow arrives in Vermont about the 28th of April. (See page 13.) They generally build their nest against a rafter or beam in the barn. It is formed principally of mud, and lined with fine grass and a few feathers. The eggs, usually 5, are white, spotted with reddish brown.

FULVOUS, OR CLIFF SWALLOW.

Hirundo fulva.—*Vieill.*

DESCRIPTION.—Top of the head, back, upper side of the tail and wings brownish black, with violet reflections from the head, back and wing coverts; forehead marked with a crescent of yellowish white; chin, throat and sides of the neck brownish red; rump yellowish red; belly white tinged with reddish brown; bill black, short, depressed, and very broad at the base. Wings long, slender; first quill longest, second nearly as long; tail even, extending as far as the folded wings. Length of the specimen before me 5½ inches; folded wing 4½.

HISTORY.—This swallow seems to have been hardly known to ornithologists till about the year 1815, when they were noticed near the Ohio river in Ohio and

THE SWALLOWS.

THE SWALLOWS.

Kentucky. In 1817 they made their appearance at Whitehall, at the south end of lake Champlain, and shortly after at Randolph, Richmond, and some other places in this state. In unsettled places they build their nests upon the sides of rocky cliffs, but here they are usually placed beneath the eaves of barns and other buildings. They are constructed principally of clay or mud, in the form of a retort or gourd, and are lined with dry grass. The eggs, usually 4, are white, spotted with brown. These swallows always build their nests in companies, and are so remarkably gregarious, that from 50 to 100 of their nests may often be counted at the same time beneath the eaves of a single building.

WHITE-BELLIED SWALLOW.

Hirundo bicolor.—VIEIL.

DESCRIPTION.—Color above light glossy greenish blue; wings and tail brownish black; belly white; the closed wings extend a little beyond the tail, which is forked; tarsus naked. *Female* like the male, but less glossy. Length $5\frac{1}{2}$ inches; spread 10.

HISTORY.—This Swallow is much less common in Vermont than the other species. Their nests are made of grass and lined with feathers, and are placed in various situations, such as beneath the eaves of old buildings, or in hollow trees, and they not unfrequently take possession of Blue bird and Martin boxes. The eggs, 4 or 5, are pure white.

THE BANK SWALLOW.

Hirundo riparia.—LINN.

DESCRIPTION.—Color above, and band on the breast, cinereous brown; beneath white; wings brownish black; tail forked, with the outer feathers edged with white; tarsus naked, excepting a few tufts of downy feathers behind; chin slightly fulvous. Length $5\frac{1}{4}$ in.; folded wing 4 in., and reaching nearly to the extremity of the tail.

HISTORY.—The Bank Swallow, or Sand Martin, is gregarious, like the Cliff Swallow, and may be found in companies in all parts of the state which afford suitable places for its habitation. These are usually sandy cliffs on banks of rivers. They commence 2 or 3 feet below the surface of the bank, and perforate the ground in a horizontal direction to the distance of from 2 to 4 feet, and at the further extremity they place their nest, which is composed of a little dry grass and a few feathers. The eggs, usually 5, are pure

white. Often from 30 to 60 or more of these Swallow holes may be counted in a bank, in the space of one or two rods. The voice of this swallow is a low mutter.

GENUS CYPSELUS.—Illiger.

Generic Characters.—Bill very short, triangular, cleft to the eyes, depressed, the upper mandible slightly notched and curved at the point; nostrils lateral, contiguous, large, partly covered by a membrane; tongue, short, wide and bifid at the tip; feet very short; toes divided, hind toe shortest, reversible, generally directed forward; nails retractile, channeled beneath; wings very long. Sexes and young nearly alike in plumage.

THE CHIMNEY SWALLOW.

Cypselus polasgius.—TEMNICK.

DESCRIPTION.—General color sooty brown, approaching to black, lightish about the throat and over the eye; legs and feet bluish, muscular, with exceeding sharp claws; the folded wings very narrow and long, extending $1\frac{1}{2}$ inch beyond the tail, which is short and rounded, with the shafts of the feathers reaching beyond the vanes into sharp, strong, and very elastic points; 2d quill of the wings longest. Length from the end of the bill to the extremity of the tail, $4\frac{1}{2}$ inches; to the extremity of the folded wings 6 in.; spread of the wings 12 inches.

HISTORY.—The Chimney Swallow is one of our most singular birds. It arrives from the south, where it has spent the winter, about the beginning of May. On their arrival here before the country was much settled, they took up their residence in large flocks in particular hollow trees, which, in consequence, received the name of Swallow Trees. Three of these trees, all large hollow elms, are mentioned by Dr. Williams (Hist. I—140) as being particularly noted in this state soon after the settlement was commenced. One of these was in Middlebury, one in Bridport, and the other in Hubbardton. About the beginning of May the Swallows were observed to issue from these trees early in the morning in immense numbers, and to return into them again just before dark in the evening. The same phenomena were also observed in the latter part of summer, before the entire disappearance of the swallows and as their departure to the south was not observed, they were generally believed to spend the winter in these trees in a torpid state. Before this country was much settled, Chimney Swallows built their nests on the interior surface of large hollow trees, but they now take advantage of unoccupied

THE WHIP-POOR-WILL.

THE NIGHT HAWK.

chimneys for that purpose, and for roosting places. The nest is formed of slender twigs, interlocked and cemented together, and to the chimney or tree, by an adhesive mucilage secreted by the stomach of the architect. The eggs are white, and usually 4. This Swallow is often called the *Chimney Swift*.

GENUS *CAPRIMULGUS*.—Linnaeus.

Generic Characters.—Bill extremely short, feeble and cleft beyond the eyes; upper mandible usually surrounded with spreading bristles, sometimes hooked at the tip, the margin turned outward; nostrils basal, wide, partly covered by a feathered membrane; tongue small, acute and ovate; tarsus partly feathered; anterior toes united by a membrane to the first joint; hind toe reversible, nails short; wings long; tail of 10 feathers; the sexes distinguishable by their plumage; the young similar to the adults.



THE WHIP-POOR-WILL.

Caprimulgus vociferus.—Wilson.

DESCRIPTION.—Variegated above with black, brownish white and rust color, with fine streaks and sprinkles; upper part of the head brownish gray, marked with a longitudinal stripe of black; tail of 10 feathers rounded, the 3 outer feathers white at their extremities; the 4 middle ones without white at the ends, but with herring-bone figures of black, and pale ochre; cheeks and sides of the head brick color; chin black with small brown spots; a semi-circle of white across the throat; breast and belly mottled and streaked with black and ochre; bristles on the cheeks much longer than the bill; middle claw pectinated; female less than the male. Length 9½, spread 19.—*Nutt*

HISTORY.—The Whip-poor-will arrives in Vermont early in May, and his plaintive note is soon heard in the groves,

along the streams and low lands in various parts of the state, even up to the northern boundary. For a nest this bird makes a slight excavation upon the surface of the dry ground, in the forest, usually by the side of a rock, a log, or a pile of bushes; and, in this, about the 1st of June, the female lays two eggs, which are of a bluish white color, thickly blotched with dark olive. The young, like chickens, are able to run about and hide themselves as soon as they are hatched; and being without a nest, and very nearly the color of the ground, they very easily escape notice.



THE NIGHT HAWK.

Caprimulgus virginianus.—Baird.

DESCRIPTION.—General color dark liver brown, often with a greenish gloss; the head, neck, back, scapulars and wing coverts spotted with white, and yellowish brown; quills of the wings brownish black, with a broad bar of white across the middle, above and below; a broad sagittate spot of pure white on the throat, and white across the tail in the male; under plumage and inner wing coverts marked with alternate bars of dark liver brown and yellowish white; wings swallow-like, reaching a little beyond the tail; 1st quill longest, 2d nearly as long; bill blackish without bristles; legs short, pale brown. Length 9½ inches; spread 23 in. Female 9 inches long, and color ochre about the head and throat.

HISTORY.—The Night Hawk arrives in Vermont in May, and is very common, during the summer, in all parts of the state. They rear their young in meadows and old fields. The eggs, which are only two, are laid upon a bare spot of ground, without any manner of nest. They are of a muddy white color, thickly freckled all over with reddish brown. During the period of incubation the males are often sporting upon the wing, and emitting their sharp squeak, high in the air, towards the close of the day, occasionally precipitating themselves towards the earth, emitting at the same time their peculiar *poo-o-o*, and then rising quickly to their former height. This sport is usual

THE PASSENGER PIGEON.

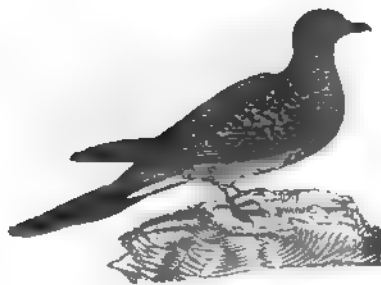
THE CAROLINA DOVE.

GALLINACEOUS BIRDS.

ly continued till nearly dark, and hence this bird, probably, received the name of Night Hawk, or Night Jar.

GENUS COLUMBA.—Linnaeus.

Generic Characters.—The bill, in this Genus, is of moderate size, compressed, vaulted, torpid towards the tip, which is more or less curved. The base of the upper mandible is covered with soft skin, protuberant at its base, in which the nostrils are situated. Nostrils medial, longitudinal. Tongue acute, entire; feet short, robust; tarsi reticulated; toes divided; wings moderate; tail of 12 or 14 feathers.



THE PASSENGER PIGEON.

Columba migratoria.—Linn.

Description.—General color of the upper plumage and breast light amber brown; rump bluish, belly and under tail coverts dirty white; nearly all the feathers above and on the breast tipped with yellowish white, forming little crescent-shaped bars; outer webs of the primaries edged with buff or rufous; tail of 12 feathers, with middle pair dark brown, and longest, the others with a basal spot of rufous and a central black spot or band on the inner web, outer feathers shortest, and white, excepting the spots, much longer than the folded wings; bill black; legs and feet dull red; breast of the male with a reddish tinge. Length 15 inches; spread 23 inches. 1st and 2d primaries equal and longest.

History.—The American Wild Pigeon is met with in greater or less numbers throughout the whole region from Mexico to Hudson's Bay. These birds are remarkably gregarious in their habits, almost always flying, roosting and breeding in large flocks. When the country was new there were many of their roosts and breeding places in this state. Richard Hazen, who ran the line between this state and Massachusetts, in 1741, stated

that to the westward of Connecticut river, he found pigeons' nests so thick upon the beech trees that 500 could be counted at one time. At Clarendon, according to Dr. Williams, (Hist. vol. I—137,) the pigeons bred in immense numbers. The trees were loaded with nests for hundreds of acres; 25 nests being frequently seen upon one tree, and the ground beneath was covered with their dung to the depth of two inches. These accounts are far exceeded by what is told of their roosting and breeding places at the west, where they often covered thousands of acres, and all the trees and under growth were killed in consequence. From 90 to 100 nests have frequently been counted on a single tree. The nests are made of twigs, the eggs are 2 and white. Pigeons are much less abundant in Vermont than formerly, but they now, in some years, appear in large numbers.

THE CAROLINA DOVE.

Columba carolinensis.—Linnaeus.

Description.—General color above pale yellowish brown; below brownish yellow; crown and upper part of the neck greenish-blue; forehead and breast vinaceous; black spot under the ear; bill blackish, purplish-red at the base; tail of 14 feathers, with the 4 lateral ones black near the extremity, and white at the tip. Length 12, spread 17.—*Mull.*

History.—The Carolina Dove, called also the Turtle Dove, is not very common in Vermont. Dr. Brewer saw a flock of them near Woodstock in August, 1839; and they have been occasionally seen in other parts. From its plaintive *agh-cdo-cdo-cdo*, it is sometimes called the Mourning Dove. They are by no means shy, are said to be easily tamed, and their flesh is pronounced equal to that of the Woodcock.

GALLINACEOUS BIRDS.

Birds of this order have the bill short and convex; the upper mandible vaulted, curved from the base or only at the point; nostrils basal, partly covered by an arched rigid membrane; feet stout, tarsus long; toes usually three before and one behind, the latter articulated higher than the rest, scarcely touching the ground at the tip, sometimes wanting; wings generally short and concave; tail consisting of from 10 to 18 feathers. Colors of the female less brilliant than those of the male. Our domestic land fowls, as hens, turkeys and peacocks, belong to this order.

THE WILD TURKEY.

THE QUAIL.

THE PARTRIDGE.

GENUS MELEAGRIS.—*Linnaeus*.

Generic Characters.—Bill entire, and at the base covered by a membrane which is prolonged into a pendulous, fleshy, conic, erectile, hairy carbuncle; nostrils oblique; tongue fleshy and entire; feet rather long; tarsus naked, provided with a blunt spur in the male; middle toe longest; nails wide and blunt, flat beneath; wings short; 1st primary smallest, 4th and 5th largest; tail of 14 to 18 wide feathers, and capable of a vertical expansion; head small, naked and warty; a pendulous tuft on the lower part of the neck. *Female smaller; colors duller and more obscure.*

THE WILD TURKEY.

Meleagris gallopavo.—*Linnaeus*.

DESCRIPTION.—Upper part of the back and wings yellowish-brown of a metallic lustre, changing to deep purple, the tips of the feathers broadly edged with velvet black; primaries dusky, banded with white; tail of 18 feathers, ferruginous thickly waved with black, and with a black band near the extremity; lower part of the back and tail coverts deep chestnut, banded with green and black; legs and feet purplish-red; iris hazel; beneath duller. *Female and young with the colors less brilliant. Length 48, spread 68.—Nutt.*

HISTORY.—The Wild Turkey, which was formerly common throughout our whole country, has every where diminished with the advancement of the settlements, and is now become exceedingly rare in all parts of New England, and indeed in all the eastern parts of the United States. A few of them, however, continue still to visit and breed upon the mountains in the southern part of the state. The Domestic Turkey sprung from this species, and was sent from Mexico to Spain in the 16th century. It was introduced into England in 1524, and into France and other parts of Europe about the same time.

GENUS PERDIX.—*Latham*.

Generic Characters.—Bill entire and bare; upper mandible vaulted and strongly curved towards the point; nostrils basal, lateral, half closed by a vaulted naked membrane; feet naked, fore toes united by a membrane to the first articulation; hind toe less than half the length of the inner; nails incurved, acute; head wholly feathered, often with a naked space around the eye; tail short, rounded, and deflected, consisting of from 12 to 18 close feathers. *Female and young scarcely differ in plumage from the male.*

THE QUAIL.

Perdix virginiana.—*Lath.*

DESCRIPTION.—Cinnamon brown above,

varied with black and whitish; crown, neck and upper part of the breast reddish brown; line over the eye and throat pure white, the latter bounded with a black crescent; wings dusky, coverts edged with yellowish white; belly yellowish white, varied with wide arrow heads of black; tail ash colored, finely spotted with reddish brown; bill black; iris hazel; legs and feet light lead color. Length 9, spread 14.—*Nutt.*

HISTORY.—This bird, generally known as the Quail in New England, is in other places more commonly called the *American Partridge*. It is not found in this state at present very plentifully, but is more common in the southwestern parts than elsewhere. They generally go in small flocks, spending most of the time on the ground, and in autumn are often seen gleaning in fields from which corn and grain have been harvested. The Quail is very prolific, laying from 10 to 18 eggs, which are white, in a nest formed partly in the ground, under the shelter of a tuft of grass. Frequent attempts have been made to domesticate the Quail, but with very little success.

GENUS TETRAO.—*Linnaeus*.

Generic Characters.—Bill short, robust, arcuated above, convex and bent towards the tip, naked at the base; nostrils basal, half closed by an arched membrane, and hidden by small feathers; tongue short, fleshy, and pointed; tarsus feathered and spurless in both sexes; three toes before united to the first joint; hind toe half as long as the inner, and roughened.

THE PARTRIDGE.

Tetrao umbellus.—*Linnaeus*.

DESCRIPTION.—General color above and beneath black, pale chestnut, and yellowish white, marbled, and disposed in spots, bars and lines. Ruff brownish black with greenish or cinnamon colored reflections. Quills liver brown, their outer webs barred near the base and mottled towards the tip with cream yellow; 4th quill longest. Tail with alternate undulating bars of brownish black, gray and faint chestnut, the subterminal bar being brownish black and broad; a light stripe from the nostril to the eye. Bill dark horn color, short, arched, and covered at the base by feathers; head and neck small; body bulky; tarsus feathered half way down before and some lower behind. Wings short and broad. Tail large, fan like, of 18 feathers. Length 18, spread 24.

THE SPRUCE PARTRIDGE.

HISTORY.—This bird, which is usually known as the Partridge in New England, is called the *Pheasant* in most other parts of the United States, and by ornithological writers is more commonly distinguished as the *Ruffed Grouse*. It is quite common and a permanent resident in all parts of Vermont. The nest of the Partridge is upon the ground by the side of a bush or log, and is very simple, consisting only of a few leaves. The eggs, usually about 12, are of a yellowish white color, and the young run about, like chickens, after their clucking mother, as soon as they are hatched. They are exceedingly wild and difficult to tame, and it is amusing to see how quick they will hide themselves under leaves and logs whenever they are approached. The male of this species is distinguished for his peculiar *drumming*, which is performed, standing upon a log in a thick part of the woods, and rapidly beating his sides for about half a minute at a time, with his wings. This operation is repeated about once in 8 or 10 minutes, and the sound produced, somewhat resembling distant thunder, is often heard at the distance of half a mile. Their flesh is much esteemed for food.

THE SPRUCE PARTRIDGE.

Tetrao canadensis.—Linn.

DESCRIPTION.—Upper parts marked with semi-circular bars of black and yellowish brown, the paler color always forming the terminal bar; outer edge of the wings, primary coverts and quills clove brown; tail black tipped with orange; breast and belly with feathers blackish tipped with white; cheeks and throat barred and mottled with white; bill and nails black; fringed comb over the eye bright red; toes pectinated. Length 17, wing 7½.—*Rich.*

HISTORY.—This Grouse, which is called, at different places, the Spruce, the Wood or the Swamp Partridge, from its favorite places of resort, is seldom seen in Vermont excepting in the most northerly parts, and there it is scarce, compared with the preceding species. Its food in winter is said to consist principally of the leaves of the white spruce, and its flesh has then a strong, disagreeable flavor. In summer it is better, but still inferior to the preceding. Its nest is upon the ground, and the eggs, which are usually not more than 5 or 6, are said to be varied with yellow, white and black. It is known to breed in several towns in Orleans county.

THE SANDERLING PLOVER.

WADING BIRDS.

In this order the bill varies in form, but is usually straight, and carried out into a lengthened and compressed cone, though rarely it is depressed, or flat. The legs are long and usually naked some distance above the knees; toes usually long and slender, three before and one behind, the latter on a level, or a little more elevated than the rest. Most of the Waders are more or less nocturnal in their habits. The sexes differ but little in external appearance. They live along the borders of seas, lakes and rivers, and feed upon fish, reptiles and insects.

GENUS CALIDRIS.—Ill. Temm.

Generic Characters.—Bill of moderate size, slender, straight, rather soft, flexible in every part, compressed from its base, with the point depressed, flattened and wider than the middle. Nasal groove elongated nearly to the point of the bill; nostrils lateral. Feet slender, the 3 toes all directed forward and almost entirely divided to their base. Wings of moderate size; the first quill longest.



THE SANDERLING PLOVER.

Calidris arenaria.—ILLIGER.

DESCRIPTION.—Color above mottled with black, white and yellowish; wings brownish black, with the shafts and tips of the quills, and a broad band extending across the whole wing, with the exception of the first 4 primaries, white. All the under plumage white, excepting a broad collar round the lower part of the neck, which is grayish; bill, legs, feet and nails black; iris hazel; two middle tail feathers longest, brownish, and edged with yellowish white. Folded wings a little longer than the tail; thighs feathered more than half way down; nails short; upper mandible longest, and curved a little at the point. *Winter plumage* nearly white. Length of the specimen before me 7½; folded wing 5; spread 14; bill, along the ridge, 1.

HISTORY.—This beautiful species, ac-

THE WHOOPING CRANE.

THE NIGHT HERON.

THE GREAT HERON.

According to Dr. Richardson, breeds on the coast of Hudson's Bay. Its nest is rudely made of grass in marshes, and the eggs are 4, dusky, spotted with black. This plover is only occasionally met with in Vermont, along the shores of our lakes and ponds. The specimen from which the above description and figure were drawn was shot in Burlington, in September, 1841.

GENUS GRUS.—Pallas.

Generic Characters.—Bill a little longer than the head, strong, straight, compressed, attenuated, and obtuse at the point; ridge of the bill elevated; mandibles with a wide furrow on each side of the base; nostrils in a furrow in the middle of the bill, pervious, posteriorly closed by a membrane; feet long and robust, naked for a large space above the knee, middle toe united to the outer one by rudimental membrane, hind toe articulated high on the tarsus; wings moderate 2d, 3d, and 4th primaries longest, secondaries broader than the primaries, tail short, of 12 feathers.

THE WHOOPING CRANE.

Grus americana.—TEMN.

DESCRIPTION.—The forehead, crown and cheeks covered with orange colored warty skin, with a few black hairs; hind head ash-color; the rest of the plumage pure white, except the primaries, which are brownish black; bill and iris yellow, legs and naked part of the thighs black. From the base of each wing arise numerous large flowing feathers, which project over the tail and tips of the wings, some of them being loose and webbed like those of the Ostrich; length 48, bill 6, height 60.—Nuttall.

HISTORY.—This bird is one of the largest of the feathered tribes in the United States, and is known in Vermont only by being occasionally seen during its migrations. It is common in summer in the fur countries where it breeds. Its two eggs are bluish white and as large as those of the swan. When wounded, says Dr. Richardson, he has been known to put the fowler to flight and fairly drive him from the field.

GENUS ARDEA.—Linn. Tem.

Generic Characters.—Bill long, robust, straight, pointed, compressed to an edge, the ridge rounded; upper mandible slightly furrowed; nostrils lateral, basal, situated in the furrow, and half closed by a membrane; orbits and lores naked; legs long, slender, lower part of the thighs without feathers; middle toe united to the outer one by a short membrane; hind toe on the same level with

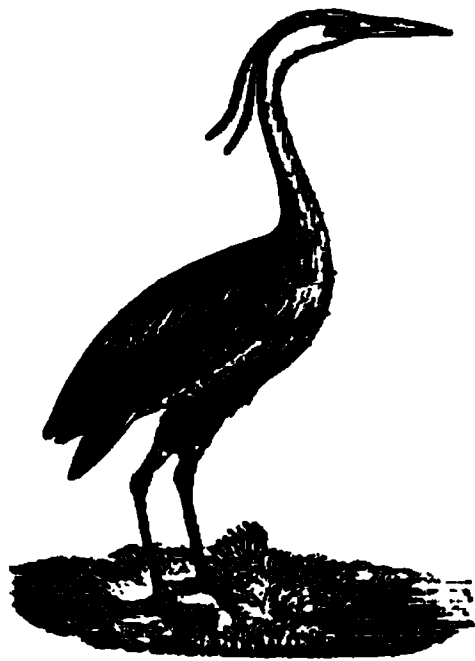
the other three; wings of moderate dimensions, obtuse; 1st primary nearly equal to the 2d and 3d, which are longest; tail short, rounded, containing 10 or 12 feathers.

THE NIGHT HERON.

Ardea nycticorax.—WILSON.

DESCRIPTION.—General color nearly white; front, occipital feathers and line over the eye pure white; crown, back and scapulars greenish; tail coverts, wings and tail pale ash; lower parts yellowish cream-color; legs yellowish green; bill black, $4\frac{1}{2}$ inches along the gap. Without crest in autumn. Young brown streaked with rufous white. Length 28, spread 48.—Nutt.

HISTORY.—Vermont is about the limit of the northern migration of this Heron, and here it is rare. It is usually called the Qua Bird. It breeds all along the Atlantic coast to the southward of New England. They build their nests in trees in the retired parts of swamps, and frequently there are two or three nests on the same tree. The eggs, about 4, are of a pale greenish-blue color, and as large as those of the common hen.



THE GREAT HERON.

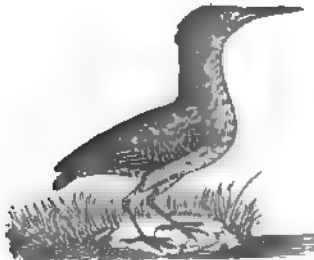
Ardea Herodias.—LINNÆUS.

DESCRIPTION.—General color grayish ash; crest brownish, the middle of the feathers striped with whitish; back of the neck ash; small feathers on the wings edged with ferruginous; feathers on the neck and breast white in the centre, edged with brown, giving a striped appearance; thighs naked some distance above the knees; feathers on the upper part of the thighs buff; legs brownish, tinged with yellow; chin, cheeks and sides of the head whitish; quills slate color; tail a little longer than the folded wings; generally two tapering feathers in the crest

THE GREEN HERON.

5 or 6 inches long. Length of the specimen from which the above description is drawn, from the point of the bill to the extremity of the tail, 46 inches; height, when standing, 40 inches; length of the bill, from the angle of the mouth, 7 in.; folded wing 19; tarsus 7½; longest toe 5.

HISTORY—The Great Blue Heron is frequently seen in the neighborhood of lake Champlain. The specimen from which the above description was drawn was shot near Burlington, and is now in the Museum of the College of Natural History of the University. They are said to rear their young in companies, making their nests with sticks in the tops of tall trees. The eggs, usually 4, are larger than those of the hen, light green, and unspotted.



THE GREEN HERON.

Ardea virescens.—Linn.

DESCRIPTION.—Color of the back, tail, crown and wings dark glossy green, approaching to black; wing feathers mostly tipped with white; wing coverts and scapulars tipped and edged with white and ferruginous; neck above and on the sides dark wine color; chin and line under the angle of the mouth, white; throat and under side of the neck, with the feathers, white, tipped or margined with brownish; belly brownish white; lore and iris bright yellow; bill black, lighter beneath and yellowish towards the base, legs and feet greenish yellow; feathers on the back of the head and neck long; tail short, consisting of 12 feathers; the 1st and 4th primaries a little shorter than the 2d and 3d, which are longest. Length 17 inches; spread 23; folded wing 7½, bill from the angle of the mouth 3; along the ridge 24 inches.

HISTORY—The Green Heron, better known by a more disgusting name, is very common in many parts of the state. It seems to prefer the solitude of swamps and marshes, where it feeds upon fishes and reptiles, and also upon dragon flies and other insects. It builds its nest upon

trees, and lays 4 blue eggs. They come from the south about the first of May, and return in October.

GENUS TOTANUS.—Beck. Temm.

Generic Characters—Bill of moderate length, straight, or a little recurved, flexible at the base, hard and acuminate at the point; both mandibles furrowed on each side to the middle; nostrils in the furrow, basal, linear and perrivous; legs long and slender; feet with three anterior toes, the exterior united to the middle one, sometimes to the second joint; wings of medium length; tail of 12 feathers, generally short.



THE UPLAND PLOVER.

Totanus Bartramius.—TEMMINCK.

DESCRIPTION.—General color above blackish, the feathers edged with tawny rufous; lower part of the back and upper tail coverts pitch black; wings brownish black above, shaft of the first primary white, and most of the primaries with concealed white spots or bars on their inner webs; chin and belly white; under tail coverts tinged with rufous; brownish sagittate spots on the breast and sides; under sides of the wings barred and waved with brown and white; tertials long; bill blackish above and at the point, yellowish below; tongue sagittate; 1st primary longest; length 12 inches; spread of the wings 22 inches; bill from the angle of the mouth 1½ inch.

HISTORY.—This species was first described by Wilson, who named it *Bartramius* in honor of his friend Bartram. It is quite common in the western parts of this state during the summer, and resides principally in meadows, feeding upon grasshoppers and other insects. Its nest is made upon the ground usually in a little clump of bushes. They are a shy bird and quite plain in appearance when seen at a distance, but closely viewed their colors appear beautifully variegated, especially beneath. They live for the most part, in pairs or families.

THE SOLITARY AND SPOTTED TATTLERS.

THE COMMON SNIPE.

THE SOLITARY TATTLER.

Totanus chloropygius.—VIEILLLOT.

DESCRIPTION.—The whole upper plumage dark hair brown, interspersed with small, irregular, marginal spots of white, and usually slightly glossed with green reflections; the lateral tail feathers with their coverts regularly barred with black and white, the bars being broadest on the former; middle tail feathers dark brown, with small white spots on the edges; primaries, their shafts and coverts brownish black, unspotted, the shaft of the 1st primary a little lightest; a short stripe over the eye, the chin, belly and under tail coverts white; neck and breast spotted or striped with brownish; under side of the wings next the base and axillaries finely barred or waved with brown and white; bill brown, with the nasal groove two thirds its length; legs and feet dusky olive. Length $8\frac{1}{2}$ inches, tail $2\frac{1}{4}$, folded wing 5, bill $1\frac{1}{2}$, tarsus 1.3.

HISTORY.—This bird is often seen along the shores of our streams and ponds, and, as it spends the whole summer with us, it doubtless breeds here; but I have not known of its nest being found. According to Dr. Richardson it breeds in most of the intermediate districts between Pennsylvania and the northern extremity of the continent, depositing its eggs upon the beach, without forming any kind of nest. It is generally seen running along upon the shore, frequently stopping, and often nodding, or balancing its head and tail, and hence its vulgar appellation is *Tip-up*.

THE SPOTTED TATTLER.

Totanus macularius.—TEMMINCK.

DESCRIPTION.—Color glossy olive brown, waved with dusky; one or more of the outer tail feathers white, barred with black; quills dusky brown, the two outer plain, the next marked with an oval white spot on their inner webs; secondaries white on their inner webs and tipped with white; below white, tinged with gray at the sides of the neck, with roundish dusky spots; bill yellow below, black at the tip; legs wax yellow; iris hazel. Length $7\frac{1}{2}$. *Young* white below, without spots.—*Nutt.*

HISTORY.—This bird is often called the *Pect-Weet*, from its shrill and peculiar note. It resembles the preceding species in general appearance, and in most of its habits, particularly in that of balancing or wagging its tail, and it bears the same vulgar name of *Tip-up*, the two kinds not being distinguished from each other by ordinary observers. This species is much

the most numerous of the two, and breeds in this state in considerable numbers. The nest is made in a tuft of grass, with a thin lining of hay. The eggs, usually 4, are of a dull cream color, spotted with brown, most thickly towards the large end. The female, when alarmed, practices much art for the safety of her young.

GENUS SCOLOPAX.—Linn.

Generic Characters.—Bill long, straight, slender, compressed, soft and flexible; the point depressed, dilated, tumid and obtuse, minutely tuberculated or dotted, projecting over the lower mandible; both mandibles furrowed to the middle. Nostrils in the furrow of the bill, basal, lateral, linear, pervious and covered by a membrane. Feet and legs moderate, slender, 4 toed, naked space above the knee small; toes entirely divided. Wings moderate, the 1st and 2d primaries longest and nearly equal. Tail short, rounded, consisting of 12 or more feathers.

THE COMMON SNIPE.

Scolopax Wilsonii.—TEMMINCK.

DESCRIPTION.—Tail rounded, of 16 feathers, with a bright ferruginous, sub-terminal bar; back and scapulars black, with bronzy reflections; rump dusky, faintly mottled and barred with pale yellowish brown; crown black, divided by an irregular line of pale brown, and another of the same tint passes over each eye; neck and upper part of the breast pale brown, with small, dusky, longitudinal spots; chin white tinged with brown; bill brown, blackish at the tip. Length 11 to $11\frac{1}{2}$, spread 17, bill $2\frac{1}{4}$ to $2\frac{1}{2}$.—*Nutt.*

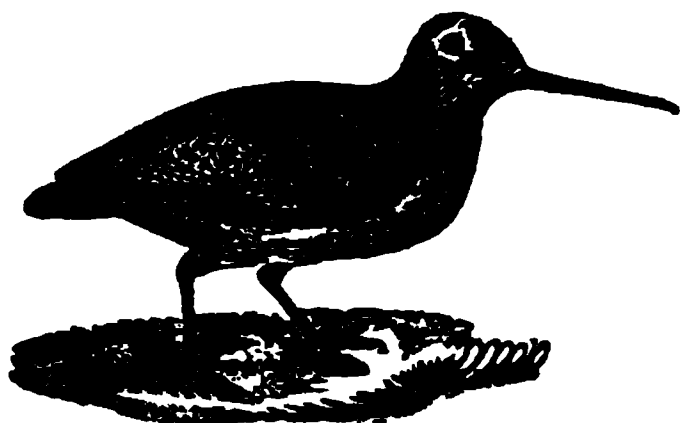
HISTORY.—This species, which is nearly related to the European Snipe, is found throughout the whole of America from Hudson's bay to the equator. This bird arrives from the south early in the spring, and spends the summer in low, moist grounds, breeding in swamps, where it lays its eggs in a hollow loosely lined with a little grass. The eggs are 4, of a yellow-olive color, speckled with different shades of brown. The young leave the nest as soon as they are hatched. The flesh of the Snipe is in high estimation on account of its exquisite flavor, on which account it is eagerly sought by the sportsman. They are frequently seen striking their bill into the black marshy soil. Their food consists principally of worms, leeches and aquatic insects.

GENUS RUSTICOLA.—Vieill.

Generic Characters.—Bill similar to that of the Snipe, but more robust, with the extremity at-

THE WOODCOCK.

tenuated and not depressed; the under mandible is also deeply grooved beneath. Eyes placed far back in the head. Legs short, robust and wholly feathered to the knees; tarsus shorter than the middle toe; toes cleft from the base, and the hind nail truncated. The 1st or 4th primary longest. Tail of 12 feathers.



THE WOODCOCK.

Rusticola minor.—NUTTALL.

DESCRIPTION.—Back darkly marbled with black ferruginous and ash; chin white; throat grayish; belly yellowish white; thighs and posterior parts beneath bright ferruginous; crown black, crossed with three light ferruginous bands, the middle one broadest. A black stripe from the eye to the angle of the mouth, and another from the bill up the frontlet; front part of the head grayish; marbling on the wings lighter and finer than on the back; legs and feet light flesh color; bill dusky horn color, nearly black at the tip; nails brownish black, small. First 4 primaries nearly equal, 3 first narrow. Length of the specimen before me 11 inches, folded wing $5\frac{1}{2}$, bill 2.9.

HISTORY.—The Woodcock is quite common in Vermont, although very seldom seen, on account of its nocturnal habits. It feeds and moves from place to place almost exclusively in the night. This bird returns from the south early, and selects a breeding place in the woods. The nest is made upon the ground, of grass and leaves. The eggs, usually 4, are of a yellowish clay color blotched with purple and brown. The young leave the nest as soon as hatched, but are unable to fly for 3 or 4 weeks. During the period of incubation the peculiar note of the male may often be heard morning and evening, while he rises spirally into the air and then descends again to the neighborhood of the nest. The flesh of the Woodcock, like that of the Snipe, is highly esteemed and eagerly sought, on account of its delicious flavor.

GENUS RALLUS.—Linn.

Generic Characters.—Bill varying in length, black at the base, and generally straight and com-

pressed; upper mandible furrowed on each side; somewhat arched and curved at the extremity, with its base extending upwards between the feathers of the forehead; nostrils situated in the furrow of the bill above its base, oblong, pervious and covered at the base by a membrane; tongue narrow, acute and fibrous at the tip; forehead feathered; legs small, with a naked space above the knee; toes wholly divided; wings moderate, rounded; tail of 12 feathers, not extending beyond their coverts. Plumage of the sexes, in general, nearly similar.

THE VIRGINIA RAIL.

Rallus virginianus.—LINNÆUS.

DESCRIPTION.—Upper part black, the feathers edged with olive brown; cheek and stripe over the eye ash; over the lores, the under eye-lid and chin white; wing coverts chestnut; quills deep dusky; throat, breast and belly reddish brown; sides and vent black, with white bars; legs and feet dusky reddish brown. Length 10, spread 14. The female a little less, and paler.—Nutt.

HISTORY.—This bird is sometimes called the Clapper Rail, but more commonly the *Small Mud Hen*. It is met with in fresh water marshes in most parts of the United States, during the summer, but migrates to the south on the approach of winter. With its neck stretched out and its short tail erected, it runs with great speed: but, when closely pursued, frequently rises upon the wing, yet seldom flies far at a time. It breeds in this state, making its nest in the wettest part of the marsh, of rushes and withered grass. The eggs, from 6 to 10, are of a pale cream color, sprinkled with brownish-red and purple. The female is so much attached to her eggs that she will sometimes suffer herself to be taken in the hands sooner than abandon them.

LOBE-FOOTED BIRDS.

This order takes its name from the circumstance of the toes of the different species being, in most cases, margined with a membrane. They are aquatic in their habits, and swim and dive with facility. They live in small flocks along the sea coast, and along the shores of lakes and ponds, feeding upon fish, reptiles, worms and vegetables. The sexes are nearly alike in plumage.

GENUS FULICA.—Briss. Linn.

Generic Characters.—Bill shorter than the head, stout, nearly straight, conical, compressed, higher than broad at base, acute at tip; mandibles equal, furrowed each side at the base, the upper covering the margins of the lower, and spreading out into a naked membrane over the forehead;

THE COMMON COOT.

THE PIED-BILL DOBCHICK.

THE BONAPARTIAN GULL.

lower, boat-like; nostrils in a furrow medial lateral, concave, oblong, pervious, half closed by a turgid membrane; feet moderate, far back; naked space above the knee small; tarsus compressed, almost edged behind; anterior toes very long, nearly divided to the base, margined on each side by a broad scolloped membrane; hind toe bearing on the ground, edged on the inner side by an entire membrane; wings moderate, rounded, 2d and 3d primaries longest; tail short, narrow, of 12 or 14 feathers; sexes and young nearly alike in plumage.

THE COMMON COOT.

Fulica americana.—Gmel.

DESCRIPTION.—Head and neck velvet black; fore part of the back, scapulars and wing-coverts blackish gray; tertiarics, tips of the scapulars, rump and tail-coverts clove brown, with a greenish tinge; quills, tail and vent pitch black; under tail coverts and tips of the secondaries white; bill pale horn color, with a chestnut ring near its tip; under plumage lead-gray; legs and toes bluish green, the scolloped membrane mostly lead color. Length 16 inches.—*Rich.*

HISTORY.—The American Coot is found throughout nearly the whole continent, and seems almost indifferent to climate, regulating its migrations principally by the scarcity or abundance of food, which consists of seeds, grasses, worms, snails, insects, and small fishes. It is nocturnal in its habits, and is said to perform its migrations by night.

GENUS PODICEPS.—Lath.

Generic Characters.—Bill moderate, robust, hard, straight, and compressed, conically elongated and acute; upper mandible deeply and broadly furrowed on each side at the base, somewhat curved at tip; the lower boat-shaped; nostrils in the furrow, basal, lateral, concave, oblong, pervious, posteriorly half closed by a membrane; feet turned outward, situated far back; the thigh almost hidden in the belly; tarsus much compressed; anterior toes greatly depressed, connected at the base by a membrane, forming a broad lobe round each toe; nails wide and flattened; wings short and narrow; tail, none. Female similar to the male in plumage.

THE PIED-BILL DOBCHICK.

Podiceps carolinensis.—LATH.

DESCRIPTION.—Upper plumage dusky brown; secondaries obliquely tipped with white; a roundish black spot under the chin; throat and cheeks below brownish gray; patch on the breast dotted or clouded with brownish white and black; belly almost white, mottled under the wings and on the flanks; rump dusky; bill with

a broad black band around its middle, including the nostrils, legs black, iris hazel. Length 14 in.—*Nuttall*

HISTORY.—These birds make some stop in our waters during their fall migration, but are not known to breed in this state. They feed upon fishes and water-insects. When alarmed they conceal themselves by sinking in the water, with only the end of the bill, by which they are enabled to breathe, elevated above the surface, and this is not easily seen. From this and other singular habits they have received the name of *Water-Witches*.

WEB-FOOTED BIRDS.

In this order, which consists wholly of Water Birds, the bill is much varied in form; the legs short, generally placed far back; the anterior toes wholly or partially connected by webs, and, in some families, all the toes are united by one membrane; the hind toe articulated, interiorly upon the tarsus, or wholly wanting.

GENUS LARUS.—Linnaeus

Generic Characters.—Bill moderate, strong, hard, compressed, with the edges sharp and curved inward, a little bent at the tip; nostrils lateral, longitudinal, linear, open and pervious; feet rather slender; tarsus nearly equal to the middle toe; web entire to the tips of the toes; hind toe very small and high on the tarsus; wings long and acute; tail even, of 12 feathers. Female smaller than the male; otherwise alike.



THE BONAPARTIAN GULL.

Larus Bonapartii.—SWA. & RICH.

DESCRIPTION.—Head bluish black; back and upper part of the wings light lead color, or pearly gray; neck, tail and whole under plumage pure white; the outer edge of the first primary and the extremities of the others, black, in some cases slightly tipped with white; in some cases the outer edge of the 2d primary is edged with a line of black; bill shining black, nearly straight, a little turgid and notched near the tip; inside of the mouth legs and feet light bright red; folded wings 2 inches longer than the tail which

THE HERRING GULL.

THE CANADA GOOSE.

is slightly rounded. Length 15 inches, the folded wing 10; bill along the gape, $1\frac{1}{4}$.

HISTORY.—This beautiful Gull is often seen in small flocks in Lake Champlain, but is most plentiful in autumn, when those which have been rearing their young at the north are proceeding southward to spend the winter. Numbers of them are however said to breed upon the islands in lake Champlain, particularly upon those called the Four Brothers. They feed principally upon insects and are distinguished by a peculiarly shrill and plaintive cry. Their flesh is esteemed good food. The specimen from which our description was made, was shot, with several others belonging to the same flock, in Shelburne Bay.

THE HERRING GULL.

Larus argentatus.—BRONX.

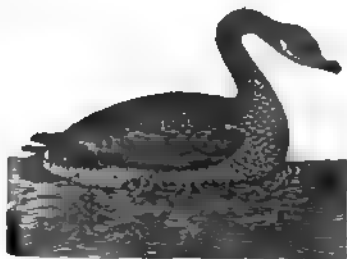
DESCRIPTION.—*Winter plumage.* Top of the head, region of the eyes, occiput, nape and sides of the neck white, each feather with a longitudinal pale brown streak; front, throat, all the lower parts, back and tail white; top of the back, scapulars, and the whole wing bluish ash; primaries blackish towards the end terminating in white; bill ochre yellow; orbits and iris yellow, the latter pale; feet reddish flesh-color. *Summer plumage,* with the head and neck pure white. Young blackish ash, mottled with yellowish rusty. Length about 24 inches.—*Mtall.*

HISTORY.—The Herring Gull derives its vulgar name from the circumstance of its feeding much upon Herrings, which it catches by following the shoals. They are common to the milder parts of both continents, and are not uncommon in lake Champlain, where numbers of them breed upon the small, uninhabited islands. The Rev. G. G. Ingersoll has procured the eggs of this Gull from one of the islands called the Four Brothers, situated five or six miles from Burlington. Their ground color is light olive, irregularly spotted with dull reddish-brown and dirty ash. The nest is usually made of sticks upon the ground or a rock, but Audubon found them at the Bay of Fundy, breeding upon low fir trees.

GENUS ANSER.—Brisson.

Generic Characters.—Bill moderate, stout, at the base higher than broad, somewhat conic, cylindrical, depressed towards the point, and narrowed and rounded at the extremity, upper mandible not covering the margin of the lower; the ridge of the bill

broad and elevated; the nail somewhat orbicular, curved and obtuse; marginal teeth short, conic and acute; nostrils medial, lateral, longitudinal, elliptic, large, open and pervious, covered by a membrane; tongue thick, fleshy and fringed on the sides; feet central, stout, webs entire; wings moderate, acute; quills strong; tail rounded. Sexes similar in plumage.



THE CANADA GOOSE.

Anser canadensis.—BONAPARTE.

DESCRIPTION.—Head, two thirds of the neck, greater quills, rump and tail pitch black; back and wings broccol-brown, edged with wood-brown; base of the neck before and the under plumage yellowish gray, with paler edges; flanks and base of the plumage generally brownish-gray. A few feathers about the eye, a large kidney-shaped patch on the throat, the sides of the rump, and tail coverts, pure white; bill and feet black; neck long. Length 41, tail 9, wing 19 $\frac{1}{2}$.—*Rich.*

HISTORY.—The Wild Goose is well known in all parts of the United States as a bird of passage. In Vermont they are seen in large numbers during their spring and fall migrations, and it is not uncommon for them to alight in our lakes and ponds to feed and rest themselves, where they are frequently shot, but they are not known to breed within the state. Their principal breeding places are further north between the 50th and 67th parallels of latitude. They lay 6 or 7 greenish-white eggs in a nest rudely made upon the ground. The residents about Hudson's bay depend much upon geese for their supply of winter provisions, 3 or 4,000 of them being killed annually, and barrelled up for use. In their migrations, Wild Geese usually fly in large flocks, arranged in the form of the letter V, with the vertex of the angle forward. Sometimes they alight in fields and meadows, and, not unfrequently, they are compelled to alight in consequence of being bewildered and lost in thick fogs and severe storms.

THE SUMMER, OR WOOD DUCK.

THE MALLARD.

Under such circumstances numbers of them are frequently shot.

GENUS *ANAS*.—Linn.

Generic Characters.—Bill broader than high at the base, widening more or less at the extremity, somewhat flattened, obtuse and much depressed towards the point; marginal teeth lamelliform, weak; upper mandible convex, curved and furnished with a slender nail at the end; the lower narrower, flat, and entirely covered by the margins of the upper; nostrils basal, approaching together, oval, open, pervious, and partly closed by a membrane; tongue stout and obtuse, fringed at the sides; each about the length of the body; feet central, small, weak, web entire; wings moderate acute; quills long, 1st and 2d longest; tail of from 14 to 16 feathers. Plumage of the sexes different.



SUMMER, OR WOOD DUCK.

Anas sponsa.—LINNÆUS.

DESCRIPTION.—Top of the head, crest, and about the eyes, different shades of green, with purple reflections; crest and side of the head marked by two white lines, one terminating behind the eye and the other extending to the bill; a black patch on each side of the neck; chin, back part of the cheek, and ring round the neck white; lower part of the neck and breast bright chestnut-brown, spotted with white; back, scapulars, wings and tail exhibiting a play of green, purple, blue, gray, and velvet black; a hair-like, splendid, reddish purple tuft on each side of the rump; belly whitish; flanks yellowish gray, beautifully waved with black, the tips of the long feathers, and also those on the shoulder, broadly barred with white and black. On most of the plumage is a play of colors with metallic lustre; bill higher than wide at the base, narrowed towards the point, flesh color above, with a black spot between the nostrils and at the tip; black below; tail of 14 wide rounded feathers, longer than the folded wings. Females without the tufts

on the rump, the fine lines on the flanks, with shorter crest, and less vivid plumage, mostly of a brownish bar. Length of the specimen before me (male) 30 inches; the folded wing 8½.

HISTORY.—The Wood Duck is one of the most beautiful birds seen in this state, and is one of the very few permanent residents here. Their food consists of tadpoles, insects and worms, and also of beechnuts and various kinds of berries. Their flight is rapid and graceful, and they also swim and dive well. Their sense of hearing is very quick, and when alarmed they sometimes conceal themselves in the water, with the bill only above the surface. Their nests are upon trees, usually in the hollow of a broken and decayed trunk, or large limb, and the eggs, from 8 to 14, are yellowish white, and a little smaller than those of the common hen. The young, when hatched, are carried down in the bill of the parent, and then conducted to the water. The flesh of this Duck is esteemed for food.

THE MALLARD.

Anas boschas.—Linn.

DESCRIPTION.—Head and upper part of the neck green, with blue and dark purple reflections; collar around the neck white; feathers of the breast dark reddish chestnut, slightly edged with white; scapulars, back and parts beneath sprinkled and waved with blackish on a white ground, much lighter towards the tail; rump and tail coverts blackish green; sides of the rump partly, and interior of the wings wholly, white; folded wing shorter than the tail; bill yellow; iris reddish brown; legs orange; Females and young brownish varied with yellowish and blackish. Length of the specimen before me, which is a male, 26 inches; folded wing 11; bill 2.1; tarsus 1.8; longest toe 2.4; width of the bill 1.1.

HISTORY.—This is our common domestic duck in its wild state. It is frequently seen in small flocks in lake Champlain, but is more plentiful at the south and southwest. The specimen from which the above description was made, was shot in the lake near Burlington in May 1842. It is finely preserved and is now in the museum of the College of Natural History of the Vermont University. Their nest is made upon the borders of rivers and lakes at some distance from the water. The eggs, from 10 to 18, are bluish white. The female frequently covers her eggs when she leaves them. The young are led to the water as soon as hatched and are at once able to swim and dive with great

THE DUSKY DUCK.

THE BLUE-WINGED TEAL.

THE GOOSANDER.

expertness. Wild ducks feed upon fish, aquatic insects and plants; and they fly in the form of the letter \gg , with the meeting of the two lines directed forward.

THE DUSKY DUCK.

Anas obscura.—Gmel.

DESCRIPTION.—Upper part of the head deep dusky-brown, with small streaks of drab on the fore part; the rest of the head and greater part of the neck dull yellowish-white, each feather marked down the centre with a line of blackish-brown; inferior part of the neck and whole lower parts dusky, the feathers edged more or less broadly with brownish white; upper parts the same, but deeper; speculum blue, with green and amethyst-red reflections; wings and tail dusky; the tail feathers sharp pointed; bill greenish ash; legs and feet dusky yellow, female brown-er. Length 24, spread 33.—Nutt.

HISTORY.—This Duck is said to be found only in North America. It is met with throughout the United States and British provinces, from Florida to Labrador, and is generally but improperly called the Black Duck. It is found alike along the sea coast, in salt marshes, and along the fresh water rivers and lakes. They breed in marshes, making their nests of weeds, and laying from 8 to 12 eggs, which are of a dull ivory white and about the size of those of the common duck. Their voice, or quack, is also similar to that of the common duck.



THE BLUE-WINGED TEAL.

Anas discors.—Linn.

DESCRIPTION.—Upper surface of the head and under tail coverts brownish black; a white crescent from the forehead to the chin bordered with black; sides of the head and neck purple; base of the neck above, back, tertiaries and tail coverts brownish-green; fore parts marked with semi-ovate pale brown bars; lesser wing coverts pure pale blue; speculum dark green; primaries, their coverts

and the tail liver brown; sides of the rump and under wing coverts white; under plumage reddish-orange, glossed with chestnut on the breast, with blackish spots; bill bluish-black; feet yellow. Female brownish, without the white before the eye and on the rump, and the purple tint on the head and neck. Young without the green speculum; in other respects like the female. Length 18 inches.

HISTORY.—The Blue-Winged Teal inhabits, according to the season, all parts of the continent up to the 58th parallel of latitude. It arrives in this state from the south in the latter part of April, and I have before me a specimen which was shot in Winooki river, at Burlington, about the first of May, 1842. They feed upon insects and vegetables, and are said to be particularly fond of wild rice. They usually become very fat, and their flesh is highly esteemed for food.

GENUS MERGUS.—Linnaeus.

Generic Characters.—Bill long, or moderate, straight, nearly cylindrical, slender, and broad at the base; the edges serrated, and the teeth subulate, sharp, and inclining backwards; the upper mandible hooked and furnished with a nail at the tip; nostrils lateral, open, situated near the middle of the bill; legs short, strong, placed far back; three anterior toes webbed to their point; hind toe articulated high with a broad membrane; wings moderate, acute; 1st and 2d primaries longest; tail short and rounded. Female and young differ considerably from the male.



THE GOOSANDER, OR SHELDRAKE.

Mergus merganser.—Linn.

DESCRIPTION.—Color of the old male above nearly black; head and upper part of the neck greenish black, with reflections; belly white, shaded with rose color. Humeral wing coverts blackish; lower part of the back and the tail ash; bill red on the sides, but black above and below; iris reddish; legs vermillion. Female and young above light slate or grayish ash, shafts of the feathers darker; secondary wing feathers and their coverts

THE LOON.

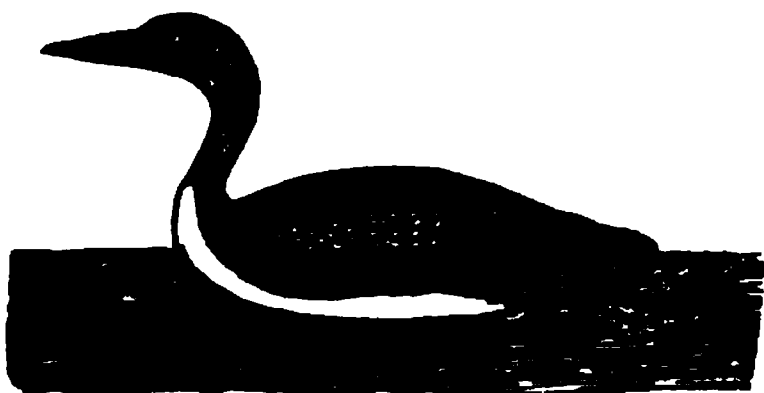
DOMESTIC FOWLS.

white on the posterior part; head, crest and neck reddish brown; chin and upper part of the breast gray; belly yellowish white; wings black, 2d quill longest; bill reddish brown above, red below; legs and feet reddish yellow; webs brownish.—Length of the specimen before, which is a female, 25 inches; folded wing $9\frac{1}{2}$; spread 32; bill, from the angle of the mouth, $2\frac{1}{4}$; tarsus $2\frac{1}{2}$; longest toe 3 inches.

HISTORY.—The Goosander inhabits the northern parts of Europe, Asia and America, where they breed and spend the greater part of the year. On the approach of cold weather they migrate towards the south, but still many of them spend the winter in high northern latitudes. They are occasionally met with in our lakes and rivers at nearly all seasons, but are not found in Vermont in very large numbers. The specimen from which a part of the above description was made, was shot in Winooski river Sept. 4, 1841. This fowl is very voracious, and feeds principally upon fishes, of which the stomach of the one above described contained the fragments of several, one of which was three inches long. The rough incurved papillæ upon the tongue, and the sharp serratures along the edges of the bill, seem admirably adapted for seizing and retaining its finny prey.

GENUS COLYMBUS.—*Linnaeus*.

Generic Characters.—Bill longer than the head, stout, straight, nearly cylindrical, compressed, with the point subulate and acute; the edges bent in, sharp and entire; nostrils basal, concave, and half closed by a membrane; feet large, placed far behind; tibia almost drawn up into the belly; tarsus strong, compressed; the three anterior toes very long, united to their tips by webs; hind toe small, touching the ground merely at the tip, united to the outer toe by a rudimental membrane; wings moderate; 1st and 2d primaries longest; tail short, rounded and composed of 18 or 20 feathers; the sexes alike in plumage.



THE LOON, OR GREAT NORTHERN DIVER.

Colymbus glacialis.—*Linn.*

DESCRIPTION.—Head and back of the neck glossy black; back grayish black

spotted with white, the spots squarish and largest on the middle of the back, roundish forward, and very small towards the rump; beneath white; neck spotted with black, with a black and whitish ring; wings brownish black above, without spots; legs black; bill dark horn color. Length of the specimen before me to the extremity of the tail 35 inches, folded wing 14 inches, bill to the angle of the mouth $4\frac{1}{2}$ inches, foot to the extremity of the longest nail $5\frac{1}{2}$ inches. The first quill longest.

HISTORY.—The Loon, or Great Northern Diver, is found in the northern parts of both the Eastern and Western Continent. In this country it resides principally in the lakes in the interior, spending nearly its whole time in the water. It dives with great facility, and is able to remain for a long time under water. Its legs are situated so far back that it is with the greatest difficulty that it walks at all upon land. The Loon is not uncommon in our lakes and ponds, where numbers of them spend the summer and rear their young. Their nest is upon the ground near the margin of a pond, and somewhat elevated above the surface of the water. The eggs are about the size of those of the domestic goose, of a dark smoky olive color, blotched with umber brown. The flesh of the Loon is tough and unpalatable.

DOMESTIC FOWLS.

The only birds we have in a state of permanent domestication are the Goose, the Turkey, the Duck, the Barn-door fowl, the Peacock the Guinea Hen and the Dove.

THE COMMON GOOSE, *Anas anser*, which has acquired so many colors in our poultry yards, originated from a wild species, which is gray, with a brown mantle undulated with gray, and an orange colored beak. The name of the species in a wild state is *Anser cinereus*. Geese are kept in considerable numbers in this state, principally for their feathers.

THE DOMESTIC TURKEY, *Meleagris gallopavo*, in its wild state, has been already described on page 101. In the domesticated state it has acquired a variety of colors and undergone some change in form and size. Turkeys are raised for their flesh which is highly valued.

THE DOMESTIC DUCK, *Anas domestica*, sprang from the common Mallard Duck, *Anas boschas*. See page 109. The change produced in the Duck by domestication is much less than in the two preceding

DOMESTIC FOWLS.

species. Very few of them are raised in this state, and these are kept rather for curiosity than profit.

BARN-DOOR FOWL, *Gallus domesticus*. This species, denominated the Cock and the Hen, varies almost infinitely in colors, and very considerably in size and form. It has been in a domesticated state from time immemorial, and more or less of them are kept by almost every family in the state. Their flesh and eggs form almost indispensable articles of food; and with suitable attention and precaution against mischief, the keeping of hens for their eggs is not unprofitable.

THE PEACOCK, *Pavo cristatus*. The Peacock is said to have been originally from the north of India, and to have been introduced into Europe by Alexander the Great. It is celebrated only for the magnificence and beauty of its plumage.

THE GUINEA HEN, *Numida meleagris*. The Guinea Hen was originally from Africa. Its slate colored plumage is everywhere sprinkled with small round white spots. In its wild state it lives in flocks, in marshes.

THE DOVE. Our common Dove is said to be descended from the Rock Dove, *Columba livia*.

The three last are kept only in small numbers, as a matter of curiosity.

The following table contains the estimated value of Poultry in the several counties in this state, according to the returns of the census of 1840.

Addison Co.,	\$8,637	Orange,	\$14,385
Bennington,	9,414	Orleans,	4,969
Caledonia,	10,029	Rutland,	13,092
Chittenden,	8,014	Washington,	15,840
Essex,	1,744	Windham,	13,854
Franklin,	5,912	Windsor,	20,313
Grand Isle,	1,873		
Lamoille,	4,122	Total value,	\$131,578

CHAPTER IV.

REPTILES OF VERMONT.

Preliminary Observations.

Reptiles are usually regarded as disagreeable and loathsome objects, though many of them, on account of their singular structure and habits, are highly interesting. These animals have cold red blood, with a dry skin, which is naked or covered with scales, and, in many species, periodically renewed. Their temperature usually corresponds with that of the medium in which they are situated. When the temperature is down to freezing they become torpid. They are found largest and most numerous in the hottest portions of the earth.

The bones of reptiles are in general softer than those of quadrupeds and birds, and vary much in their connection and number in the different genera. Frogs and toads have no ribs; serpents have them detached without a sternum; tortoises have them all united together; and lizards have them like birds. Some of these animals have four feet, others two, and others none. Some are fitted for leaping, others for crawling, and others for swimming, and several for all these modes of progression. Their circulation is imperfect, their sensations obtuse, and they are in general sluggish in their habits.

Reptiles all produce their young by means of eggs; these are not, however, hatched by the parent, but deposited in situations favorable for their development. In some genera the young are produced perfect, while in others they are of a widely different form, being shaped like, and having the habits of a fish, and like insects undergoing a transformation before arriving at perfection, of which the tadpole and frog afford a familiar example.

In his classification of Reptiles, Cuvier adopts the arrangement of Brongniart, who takes the characters of his orders from the principal organs, in conjunction with the animal functions. In this arrangement they are divided into the four following orders.

I. *Chelonia*, or Tortoises. Body covered with a shield, or plate.

II. *Sauria*, or Lizards. Body covered with scales.

III. *Ophidia*, or Serpents. Destitute of feet.

IV. *Batrachia*, or Frogs, &c. Body covered with a naked and loose skin.

The following is a list of the Reptiles found in Vermont, arranged in the order in which they are described in the subsequent pages.

ORDERS OF REPTILES.

THE PAINTED TORTOISE.

ORDER CHELONIA.—Tortoises.

- Emys picta*, Painted Tortoise.
 " *insculpta*, Sculptured Tortoise.
Euglemus serpentina, Snapping Tortoise.

ORDER SAURIA.—Lizards.

There are none of this order found in the state.

ORDER OPHIDIA.—Serpents.

- Coluber sirtalis*, Striped Snake.
 " *securita*, Ribbon Snake.
 " *ordinatus*, Brown Snake.
 " *ocypio maculatus*, Spotted-neck Snake.
 " *punctatus*, Ringed Snake.
 " *vernalis*, Green Snake.
 " *constrictor*, Black Snake.
 " *eximius*, Chicken Snake.
 " *sipedon*, Water Snake.
Crotalus durissus, Rattle Snake.

ORDER BATRACHIA.—Batrachians.

- Rana pipiens*, Bull Frog.
 " *fontinalis*, Spring Frog.
 " *halocina*, Leopard Frog.
 " *palestris*, Pickerel Frog.
 " *sylvatica*, Woods Frog.
 " *horreorum*, Horicon Frog.
 " *melanota*, Black Frog.
Hyla pickeringii, Pickering's Hylodes.
Hyla versicolor, Tree Toad.
 " *squarrela*, Peeping Tree Frog.
Bufo americanus, Common Toad.
Salamandra symmetrica, Symmetrical Salamander.
 " *dorsalis*, Many Spotted do.
 " *salmona*, Salmon colored do.
 " *tigrina*, Tiger Salamander.
 " *penana*, Violet colored do.
 " *erythronota*, Red-backed do.
 " *glutinosa*, Glutinous do.
 " *bilineata*, Two lined do.
Masticranchus maculatus, Proteus.

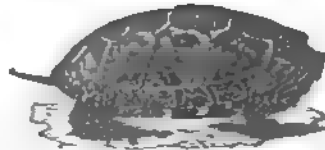
ORDER I—CHELONIA.
TORTOISES.

Animals of this order have four feet, a heart with two auricles, and the body enveloped in two plates, or shields, formed of the vertebrae and ribs above and sternum beneath. Tortoises have no teeth, but their jaws are invested with a bony substance which serves as a substitute for teeth. The sexes may in general be distinguished by the cavity in the sternum of the male. They possess great tenacity of life, moving for a long time after their heads are cut off. They require little nourishment, and can pass months, and even years, without eating.

Genus *Emys*.—Brongniart.

Generic Characters.—Shell depressed, sub-
 lid; sternum broad, solid, immovable, firmly
 joined to the shell, consisting of twelve plates, and
 four supplemental ones; extremities palmated;

anterior with five nails and posterior with four;
 head of ordinary size; tail long.



THE PAINTED TORTOISE.

Emys picta.—SCHNEIDER.

Description.—Shell oblong, oval, rather depressed, smooth, and of a dusky brown color; all the dorsal and lateral plates margined with yellow; a reddish yellow line along the middle of the back; first vertebral plate quadrangular, wider on the fore part and slightly elongated behind, the second six sided, the third quadrangular, the fourth six sided, narrow behind, the fifth seven sided; the first lateral plate four sided, upper edge narrow, the lower rounded; the second and third nearly square. The intermediate marginal plate is narrow, with a notch on each side; all the rest are either oblong or square, each having a red spot in the centre, surrounded by irregular concentric red lines; marginal plates mostly red beneath; sternum reddish yellow, serrated before; pectoral plates narrow; caudal plates triangular, rounded behind; head and skin generally dark brown; an oblong yellow spot behind each eye, and another upon the back part of the head; cheeks and chin striped with yellow, becoming red on the neck; legs striped and spotted with red; tail with two yellow stripes above and two red ones on the sides, which unite beneath in one; eyes small, pupil black; iris golden, with a broad black stripe through the middle. Length of the shell of the specimen before me 5 inches; width 4½; height 2½. Plates D. 5, L. 8, M. 25, S. 12.*

History.—This is our most common species of tortoise, and exists in large numbers in the coves along the margin of Lake Champlain and in the stagnant waters about the mouths of our rivers. It is very aquatic in its habits, and is seldom seen more than a few feet from the water. In the spring of the year, when the marshes are inundated, hundreds of these animals may be seen at a time, sitting upon the rocks and logs which lie partly above the water, and basking in the sun. On approaching them they immediately plunge into the water and disappear. When the

* D—dorsal, L—lateral, M—marginal, S—sternal.

THE SCULPTURED TORTOISE.

Painted Tortoise is first hatched it is very thin and nearly circular, and the color of the sternum deep red. As it grows the back becomes more elevated and the sides compressed, and the red of the sternum usually assumes a yellowish hue, and in some cases the red entirely disappears, leaving the sternum wholly yellow. It feeds upon shell-fish, insects and reptiles.



THE SCULPTURED TORTOISE.

Emys insculpta.—LE Conte.

DESCRIPTION.—Shell oval, slightly carinated and emarginate behind; all the plates with yellowish radiating lines and striae, cut by other concentric striae; first vertebral plate pentagonal, the 2d, 3d and 4th subhexagonal, the 5th octagonal; six of its faces anterior; 1st and 4th lateral plates pentagonal, 2d and 3d subheptagonal; intermediate marginal plate very narrow; the first pentagonal projecting a little beyond the next; the rest mostly quadrangular; the three plates on each side of the caudal plates slightly revolute; sternum notched behind, yellow and striated, all the plates being marked with a large black spot on their posterior part; plates under the throat triangular; all the rest quadrangular; skin granulated or scaly, reddish black above, dull red beneath; head, nails and tail black, jaws dark horn color, marked with yellow. Length of the shell of the specimen before me $6\frac{1}{2}$ inches; width $6\frac{1}{2}$; width of the head 1 inch; length of the tail beyond the shell $1\frac{1}{2}$ inch; height 3 inches.

Plates D. 5, L. 8, M. 25, S. 12.

HISTORY.—This species, when fully grown, is a little larger than the preceding. It is not so aquatic in its habits, it being frequently found at a considerable distance from the water, and being often met with in the woods, it is sometimes called the Wood Tortoise. The Sculptured Tortoise not only resorts to cover, and the deep, still waters of rivers, but is frequently found taking shelter in the deep, narrow rills in our pastures and meadows. The lateral plates seem in this species to be subject to some variation. In one of my full grown specimens the lateral plates are only three, instead of four, upon each side. Food of this species the same as of the preceding.

THE SNAPPING TORTOISE.

GENUS EMYSAURUS.—Dumeril.

Generic Characters.—Head large, covered with small plates; snout short, jaws hooked; two warts beneath the chin; sternum immovable, cruciform, composed of ten plates; three sterno-costal plates; fore feet with five claws, hind feet with four; tail long, surmounted with a scaly crest.



THE SNAPPING TORTOISE.

Emysaurus serpentina.—Linnæus.

DESCRIPTION.—General color dark greenish brown above, lighter and yellowish beneath; upper shell oval, depressed and notched behind; vertebral plates scabrous; lateral marked near the base with concentric striae; marginal oblong, the six posterior ones forming six obtuse teeth, projecting backwards; sternum narrow, lozenge-shaped, pointed and entire at both ends; head, neck and limbs very large and strong; jaws sharp, hooked; skin of the neck and legs granular above and warty beneath; two prominent warts under the chin; fore legs with rows of broad sharp scales; hind legs with several broad scales beneath; claws strong, five before and four behind; tail straight, about two thirds the length of the shell, tapering, and crested with large bony prominences, which gradually diminish towards the end; sides and under part of the tail covered with smaller scales. Length of the shell, of the specimen before me, 11 inches; width 9 inches; tail 8 in.; head $3\frac{1}{2}$ in. long, $2\frac{1}{4}$ wide. Plates D. 5, L. 8, M. 25, S. 11.

HISTORY.—This is the largest species of Tortoise found in Vermont, often weighing from 15 to 18 or 20 lbs. It is much more disposed to bite than the preceding species. It will seize upon a stick held towards it, and suffer itself to be raised by it from the ground sooner than relinquish its hold; and hence it is usually called in New England the Snapping Turtle; or Tortoise. At the south it is called the Alligator Tortoise, from the resemblance of its crested tail to that of the Alligator. This species is often found at a considerable distance from water, and will live a long time without water. It feeds upon fishes, reptiles, and young

LIZARDS.

SERPENTS.—THE STRIPED SNAKE.

THE RIBBAND SNAKE.

birds, and is said sometimes to catch chickens.

ORDER II—SAURIA.

LIZARDS.

These have elongated bodies, covered with scales, usually four feet; some with claws and some without; an elongated tail; mouth furnished with teeth. No species of this order has been observed in Vermont. The reptiles usually called Lizards here all belong to the Salamander family.

ORDER III—OPHIDIA.

SERPENTS.

Serpents have a heart with two auricles, an elongated, cylindrical body, destitute of feet, and for the most part covered with scales. They move by means of the folds and flexure of their bodies. They are sometimes divided into *venomous* and *non-venomous*. The Rattle Snake is the only venomous or poisonous serpent found in Vermont.

GENUS COLUBER.—*Linnaeus*.

Generic Characters.—Body long, cylindrical and tapering, head oblong, covered above with smooth polygonal plates; above covered with rhomboidal scales, imbricate, reticulated, carinated, or smooth; abdomen with transverse plates: beneath the tail with double plates; anus transverse, simple; jaws furnished with sharp teeth; without poisonous fangs. Some species are oviparous, and others ovo-viviparous.

THE STRIPED SNAKE.

Coluber sirtalis.—*LINNAEUS*.

DESCRIPTION.—Upper part of the body dark brown, with a narrow yellow line extending from the head along the back to the tail, and a broader parallel stripe of the same color on each side joining the abdominal plates; belly greenish yellow; abdominal plates marked on each side with two black spots; scales oblong, carinated, small on the back and increasing in size towards the abdomen; head flattened, covered with ten plates, one at the nose, two pair back of this, three between the eyes, and behind these two larger ones; pupil of the eye black, iris reddish; small sharp teeth in the jaws and palate. Of three specimens before me, the first, 22 inches long, has 154 abdominal plates, and 75 pair of subcaudal scales, the second, 21 inches long, has 146 plates, and 62 pair of scales, and the third 27 inches long, of which the tail measures 6, 141 plates and 60 pair of scales.

HISTORY.—This is the most common and generally diffused species of snake in Vermont, and is universally known by the name of *Striped Snake*. It is perfectly harmless, excepting sometimes to catch a chicken, gosling, or young turkey or duck, and rob birds' nests of their eggs, or young. They also feed upon toads and frogs. Serpents do not chew their food like quadrupeds, but whatever they eat they swallow whole. Their jaws are so constructed as to be separable at the joint, which enables them to swallow animals much larger than themselves; and instances of their swallowing such animals fall under the observation of every field laborer. Often does a large sluggish snake lie in his way, with a portion of his body distended to near the size of his fist. On killing and opening him, a large frog, toad, or other animal is found, which the gormandizer had caught, lubricated and swallowed alive; and for the digestion of which all the energies of the animal were now employed. Often have we ourselves been startled by the piercing and mournful cry of a poor frog, which had been caught by one of these animals; and how indignant have we been, on going to the spot, to see the horror-stricken sufferer, with his hind quarters ingulfed in the throat of a huge snake, vainly struggling with his fore feet to extricate himself, and at the same time uttering a most piteous moan. Under such circumstances it has afforded us real satisfaction to destroy the cruel aggressor and liberate his wretched victim. For the purpose of robbing birds' nests this snake will climb fences and bushes several feet from the ground. The usual length of this snake is about two feet, of which the tail constitutes one fourth. He sometimes attains the length of about three feet.

THE RIBBAND SNAKE.

Coluber saurita.—*LINN*.

DESCRIPTION.—Form more slender and graceful than that of the striped snake, which it resembles in the arrangement of its stripes. A bright yellowish white line begins between the posterior plates on the head and extends along the back to the extremity of the tail. On each side of this, commencing at the orbit of the eye, is a shining black line which fades into brown towards the posterior extremity. Then comes a narrow yellow line on each side, commencing half an inch back of the angle of the mouth, which also fades into umber brown towards the tail. Below these, on each side, is a broad, well-defined stripe of umber brown, slightly

THE BROWN SNAKE.

bronzed, embracing a row of large scales, whose keels form a distinct lateral line, and extending down upon the abdominal plates and subcaudal scales. The margin of the upper jaw, the under jaw and belly are white; all the colors fainter and blended towards the tail. The upper jaw margined by 15 and the under by 21 marginal plates; two rows of teeth in the upper and one in the lower jaw, all small and sharp. Length of the specimen before me 29 inches; to the vent 20, tail 9. Head covered with 10 plates, the posterior largest. Abdominal plates 165, subcaudal scales 110 pair.

HISTORY.—I forwarded a specimen of this snake to my friend Dr. Storer, of Boston, who, in acknowledging its reception, says that it "is without any question the *sirtalis*." After so decided an opinion from such high authority, it may be thought presumption in me to introduce it as a different species; but knowing it, from my own observations, to differ very considerably from the common *C. sirtalis*, both in appearance and habits, and finding it to agree as nearly with the descriptions which I find of the *C. aurita*, I have ventured to describe it under that name, that the differences between it and the *sirtalis* may be seen. Besides differing in form and color, and in the much greater number of subcaudal scales, it is far more lively and quicker in all its motions, and so far as my own observation extends is always found in low grounds, and at no great distance from water. Among hundreds of the *C. sirtalis* which I have seen upon the high lands and mountains in this state, I have never met with an individual answering to the description here given. Shaw calls the color of the stripes of both these species bluish-green, from which it is probable that his descriptions were made from specimens preserved in spirits, since the yellow stripes in these serpents, under such circumstances, assume that hue.



THE BROWN SNAKE.

Coluber ordinatus.—LINNÆUS.

DESCRIPTION.—Brownish ash or clay color above, lighter beneath; a light stripe along the back from the head to the tail, on each side of which is a row of black

THE SPOTTED-NECK SNAKE.

spots, and two rows of similar spots, but much smaller, along the extremities of the abdominal plates on each side, the spots becoming obsolete towards the tail; scales carinated, small on the back but increasing in size towards the belly; head small, covered with ten plates of an olive brown color, the two posterior, and the middle one between the eyes, largest. The upper jaw is margined by 14 scales, and the lower by 12, besides the tip; an oblique black band crosses the angle of the mouth, and another a little back of it on the upper part of the neck; teeth in both jaws, and two rows of hooking teeth in the palate; eyes small; iris bright hazel. Length of the specimen before me about 15 inches; abdominal plates 130; a small part of the tail broken off.

HISTORY.—This plain and harmless little snake is frequently met with, but is less common than several other species. I have met with only two or three individuals in Burlington. It feeds upon insects.



THE SPOTTED-NECK SNAKE.

Coluber occipito-maculatus.—STORER.

DESCRIPTION.—Color above varying in the specimens before me, six in number, from light ash gray and reddish brown to nearly black; belly from a light brick red to a very dark copper color; three fulvous spots on the neck, one at the occiput above, and one below, on each side; in some of the specimens a row of blackish scales, usually slightly marked with white on each side of the dorsal line, and another row at the commencement of the abdominal plates; in others the color above is uniform; 12 plates margin the upper jaw besides the one at the snout; snout and under jaw yellowish white, and a white spot at the angle of the mouth; throat grayish, gradually passing into red on the abdomen; width of the head equal to that of the body; neck small, body gradually enlarges from the neck to near the vent, where it is largest; tail short and sharply pointed, contained 4½ times in the total length; iris reddish hazel. Length of the longest specimen 9.9 inches, tail 2.2, with 119 abdominal plates and 45 pairs of subcaudal scales; another

THE RINGED AND GREEN SNAKES.

about the same length had 122 plates and 46 pair of scales; the shortest 3.7 in., tail .8, plates 119, scales 42 pair; the others not counted.

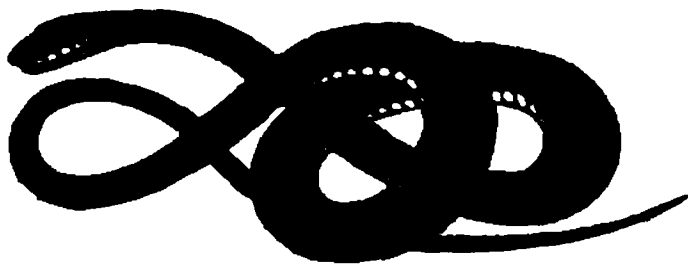
HISTORY.—This mild and inoffensive little snake, though very common in and about Burlington, is seldom seen in the early part of summer. They begin to make their appearance abroad about the beginning of September, and during that month, and the greater part of October, they are in some years met with in large numbers, varying in length from 3 to 10 or 11 inches, which is about the extent to which they grow. The shade of color above seems to be as various as the individuals. In the whole number which I have examined I have not found two alike; but in all, the contrast between the color above and that of the belly is very marked, and the spots on the neck and at the angle of the mouth have been constant, and in most cases very plain.

THE RINGED SNAKE.

Coluber punctatus.—LINNÆUS.

DESCRIPTION.—Color above uniform bluish brown, approaching to black in some specimens; beneath yellow; margin of the upper jaw, lower jaw and band round the neck, yellowish white; a row of small black spots along each side of the abdomen at the meeting of the dark color above with the light color below; usually a similar row of spots along the middle of the abdomen from the chin to the vent, but this is wanting in the specimen before me. Head flattish, about the width of the body, neck but little smaller than the body. Length 13 inches, tail 3, plates 164, scales 60 pair.

HISTORY.—This snake is of a timid disposition, being seldom seen abroad, but is often met with in different parts of the state, concealed under stones, logs, and the bark of old, decayed trees. Its food consists principally of insects.



THE GREEN SNAKE.

Coluber vernalis.—DE KAY.

DESCRIPTION.—Color above beautiful grass green; beneath greenish, or yellow-

THE BLACK SNAKE.

ish white; margin of the upper jaw yellowish; pupil black, upper edge of the iris yellow, below grayish brown. Scales not keeled, smooth, rhomboidal, with the acute angles truncated, giving them the appearance of unequal sided hexagons. Head flattened and covered with 10 plates, one at the snout, two pair behind these, then 3 plates between the eyes, 2 larger ones behind these upon the occiput, upper jaw bordered by 15 scales, including the one at the snout; nostril circular, and near the end of the snout. Length of the specimen before me 18½ inches, head ½ in, from the snout to the vent 11½, tail 6., width of the head .3. Tail terminated in a sharp, horn-colored spine. Abdominal plates 131, sub-caudal 170 in the two rows.

HISTORY.—This beautiful and lively little snake is very common in the western parts of the state, and particularly in the neighborhood of lake Champlain. It is perfectly harmless, and feeds principally upon insects. On the east side of the Green Mountains in this state, it is quite rare, if found at all.

THE BLACK SNAKE.

Coluber constrictor.—LINNÆUS.

DESCRIPTION.—Color above almost black; beneath, slate-color; neck, margin of the jaws, and snout, yellow. Plates on the top of the head very large; that at the snout convex, projecting, yellow bordered with black at the upper and lateral margins; first pair of plates nearly quadrangular; the second, pentagonal; middle plate between the eyes hexagonal and largest of the three; 16 plates border the upper jaw; eyes large; nostrils large, vertical, situated between the 2d and 3d plates back of the snout; three pair of elongated plates on the throat just back of the chin; back of these two pair of smaller ones; back covered with large rhomboidal smooth scales. Length 51 inches, tail 11. Abdominal plates 184, scales 85.—Storer.

HISTORY.—This snake is met with only in the south and southwestern parts of the state, and even there it is not very common. It sometimes grows to the length of 6 feet, and runs with great speed, on which account it is sometimes called the Racer. It is perfectly harmless, and feeds upon toads, frogs, meadow mice and small birds, swallowing them whole. It was formerly very generally believed to possess the power of fascination, and Dr. Williams adduces (Hist. I—485,) the testimony of several persons in support of the opinion, but the notion is now very generally exploded.

THE CHICKEN AND WATER SNAKES.

THE BANDED RATTLE SNAKE.



THE CHICKEN SNAKE.

Coluber esimius.—DE KAY.

DESCRIPTION.—Color light ash, with numerous large ocellated wood brown spots surrounded with black, which cover more than half of the upper surface. A row of these spots, which are very large, passes from the head along the back to the extremity of the tail; another row of similar but smaller spots passes along each side, the spots lying intermediate between those on the back; belly light flesh color, with quadrangular brownish spots; iris reddish orange. Body elongated; size nearly uniform from the head to the vent, and covered above with rhomboidal scales, each having two punctures, or indentations, near the posterior extremity. Head covered with 10 plates, the central one between the eyes triangular, and the two posterior ones very large; upper jaw margined by 14 and the lower by 18 scales, besides the one at the tip; tail terminated in a blunt horny spine. Length of the specimen before me 32 inches, tail $4\frac{1}{2}$, head 1, width $\frac{1}{4}$ the length. Abdominal plates 206, subcaudal scales 46 pair.

HISTORY.—This snake is occasionally met with in all parts of the state, but is not very common. It is called the *Chicken Snake* on account of its occasionally destroying young chickens. It is also called the *House Snake*, because it is often met with in and about old houses; and the *Milk Snake* from its supposed fondness for milk. In some places it is known by the name of the *Chequered Adder*, or *Thunder-and-Lightning Snake*. This snake sometimes exceeds five feet in length, with a circumference in the largest part of more than 4 inches. They feed principally upon toads, frogs and salamanders, and are supposed also to catch mice. The opinion seems to be prevalent that this snake is poisonous, but we have seen no evidence adduced in its support. It is very sluggish in its habits and movements, and may be often seen stretched along in the side of a stone wall, basking in the sun.

THE WATER SNAKE.

Coluber sirodon.—LINNÆUS.

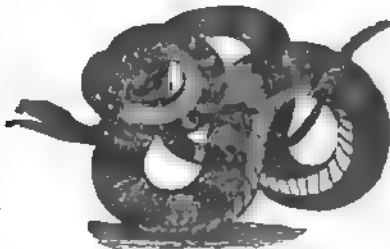
DESCRIPTION.—Color above dark brown

with large club-shaped spots upon the sides of light yellowish brown surrounded by blackish, which join the light color of the belly, and usually run to a point on the back, sometimes meeting, but more commonly alternating with the spots on the opposite side; belly mottled with blackish, yellowish-brown and yellowish-white, the latter mostly triangular, and in longitudinal rows; darker beneath the tail. Body thick in proportion to the length, and nearly uniform in size from the neck to near the vent, after which it tapers rapidly to a point; scales strongly carinated, especially on the posterior part of the body. Length of the specimen before me 28 $\frac{1}{2}$ inches, tail $7\frac{1}{2}$, plates 140, scales 72 pair.

HISTORY.—This Snake is never seen at much distance from the water, but is quite common in the marshes and grassy coves along the margin of lake Champlain, and about the mouths of our large rivers. It sometimes grows to the size of a man's wrist, and is generally avoided as venomous. It feeds upon frogs and salamanders.

GENUS CROTALUS.—LINNÆUS.

Generic Characters.—Head large, triangular, rounded in front, covered with plates anteriorly; vertex and occiput with scales; a deep pit between the eye and nostril; upper jaw armed with poisonous fangs; body elongated, thick; tail short and thick, terminating in a rattle, which is a corneous production of the epidermis; plates on the abdomen and under the tail.



THE BANDED RATTLE SNAKE.

Crotalus durissus.—KALM.

DESCRIPTION.—Upper parts yellowish-brown, with rhomboidal black spots along the back, margined with bright yellow; upon the sides of these rhombs a black band is continued to the sides of the body, where it terminates in an irregular quadrate black spot; tail black; under parts yellow, with fuliginous dots and blotches; scales on the back elongated, carinated,

FROGS AND SALAMANDERS.

THE BULL FROG.

larger and less carinated on the sides; top of the head flattened, scales upon the top small, on the sides large, pentagonal—on the edges of the jaws quadrangular; snout terminated by one plate; a quadrangular plate on each side of this; directly back of these a smaller one in which are the circular nostrils, situated obliquely, pointing forwards; above the two lateral plates, two others are situated; the first meeting the snout anteriorly, and the second extending some distance beyond the nostrils behind; a large plate at the anterior angle of the eye, separated from the nostrils by two quite small ones, at the anterior inferior angle of which is the aperture for the poison; a large plate over the eye; two still larger upon the throat. Length 37 inches, head $1\frac{1}{4}$, width of the head one inch. Rattles, 6; abdominal plates 170, caudal 24.—*Sterner*.

HISTORY.—This is the only poisonous reptile known to exist in Vermont; and although Rattle Snakes were formerly found here in considerable numbers, they were mostly confined to a very few localities, from which they have now nearly disappeared, but still the remembrance of these localities is, in most cases, preserved in the name of "Rattle Snake Hill," or "Rattle Snake Mountain." The Rattle Snake feeds upon young birds, mice, and reptiles. Its poisonous fangs are situated in the upper jaw, and used only as weapons of defence; and as it always gives warning with its rattles before it strikes, cases of persons being bitten by it in this state have been extremely rare, and in no case, within my own knowledge, fatal. The rattles consist of horny portions of the tail loosely attached to one another, and it has generally been supposed that a rattle is added every year, and that the number of rattles indicates the age of the animal. But this is a mistake. In some cases several new rattles are added in a year, and in others none at all. The Rattle Snake has also been supposed to possess the power of fascination, by which it charmed birds and squirrels, causing them to leap into its mouth, but the opinion is totally erroneous. The motions of this serpent are moderate, and its body thick and clumsy, in which respect, as well as in the form of the rattles, which are not spiral, our figure is erroneous, being much too slender.

ORDER IV.—BATRACHIA.

FROGS AND SALAMANDERS.

In animals of this order the heart has but one auricle, and the body is covered

with a naked skin. In their mature state they are provided with lungs; but before their transformation they breathe by branchim or gills. This order may be divided into two families. The Frog Family and the Salamander Family, or the tailless and the tailed batrachians.

I.—FROG FAMILY.

This family embraces the Frogs, Tree Frogs and Toad. Their common mode of progression is by hops or leaps.

GENUS *RANA*.—*Linnaeus*.

Generic Characters.—Body covered with a smooth skin; upper jaw furnished with a row of minute teeth; another interrupted row in the middle of the palate; no post-tympanal glands; posterior extremities long, and in general fully palmated; fingers four; toes five in number.



THE BULL FROG.

Rana pipiens.—*Linnaeus*.

DESCRIPTION.—Color above yellowish green, approaching to brownish olive towards the posterior parts, and sparsely spotted with pale rusty brown; the posterior extremities with a few brownish bars; head and upper lip green, tympanum elliptical, large, rusty round the margin, greenish in the middle; under lip, chin and throat yellow; other parts beneath yellowish white; nostril mid-way between the eye and the snout, and the distance between the nostrils equal to the distance from the nostril to the snout; eyes prominent, pupil black, iris reticulated with black and yellow; a cuticular fold from the orbit passes over and down behind the tympanum, and, upon the shoulder, meets another fold passing from the mouth along the lower part of the abdomen; skin granulated. Length of the head and body of the specimen before me $5\frac{1}{2}$, posterior extremities 8; hind feet fully webbed; greatest diameter of the tympanum 7.

HISTORY.—This is the largest frog found in Vermont, often growing considerably larger than the specimen above described. It is very common in various parts of the state, particularly in the neighborhood of lake Champlain. It is very aquatic in its habits, being seldom

THE SPRING FROG.

THE LEOPARD FROG.

THE PICKEREL FROG.

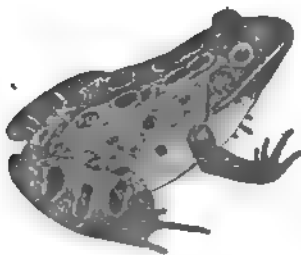
seen at a distance of more than a few feet from the water. It feeds upon worms, water insects and small molluscons animals. The stomach of the specimen from which the above figure and description were made, contained the elytra of large coleopterous insects.

THE SPRING FROG.

Rana fontinalis.—LE CONTE.

DESCRIPTION.—Head and anterior portion of the body above green, irregularly spotted with brown; posterior parts brownish or greenish ash, spotted with black; snout yellowish; chin yellowish white; posterior margins of the jaws black, or spotted with black; belly white and skin very smooth; skin above and on the posterior parts of the thighs granulated; eyes very prominent, pupil black, surrounded by a golden line; iris finely mottled with black and golden, and surrounded by a golden line; tympanum yellowish brown; a dark colored band along the posterior of the fore leg; hind legs darker, irregularly barred and blotched with black; nostril nearer the eye than the snout; a cuticular fold from the orbit along the side of the back, from which a fold passes down behind the tympanum. Anterior toes 4 in., posterior 5. Length $3\frac{1}{2}$, posterior extremities $5\frac{1}{2}$.

HISTORY.—This frog is found more generally diffused over the state than any other. It is common in most of the small streams, and especially about springs, and hence its name, Spring Frog.



THE LEOPARD FROG.

Rana hallowellii.—KALM.

DESCRIPTION.—Upper part of the body brownish bronze, marked with large, distinct, circular, oblong and irregular spots, of a dark green or brown color, and usually surrounded by a delicate light, or yellowish green border; usually two irregular rows of spots along the back, and one, two, or three still more irregular

along each side; sides separated from the back by an elevated bronze-colored ridge; fore legs with spots, and hind legs with spots and bars, similar to those on the body; a black line along the margin of the upper lip, excepting at the point; tympanum small, bronze-colored, and nearly round; eyes prominent, pupils black, and iris varied with black and bronze, the latter forming a long line over the pupil; throat and belly white and smooth; feet palmated; the fourth toe much larger than the rest, and tubercles beneath the joints of all the fingers and toes. Length of the specimen before me, which is of about the usual size, $3\frac{1}{2}$ inches; length of the hind leg to the end of the longest toe $5\frac{1}{2}$ inches.

HISTORY.—This is one of the most common and least aquatic of all our frogs. During the summer, it is met with in fields and moist meadows, at a great distance from any water. It was called by Kalm, who first described it, the *Shad Frog*, from its making its appearance in the Spring at the same time with the Shad, but it is better known by the name of Leopard Frog, on account of its ocellated spots.*

THE PICKEREL FROG.

Rana palustris.—LE CONTE.

DESCRIPTION.—Color brownish ash above; throat and belly white; flanks and under sides of the limbs yellow; back, sides, upper sides of the limbs, and the margin of the under jaw spotted, or barred with brownish black. Spots along the back squarish, in two longitudinal rows, with two rows of similar, but smaller spots, on each side below the lateral line, which is distinct, of a bronzy hue, and extends from the eye to the posterior part of the body. There are usually two spots between the eyes and one in front; hind legs barred with brownish black, and a few spots of the same on the fore

* Frogs seem to be able to subsist for an unlimited length of time in a torpid state. There have been repeated and well authenticated instances of their being dug up, in this state, from depths and under circumstances which made it nearly certain that they must have lain there for many centuries. Dr. Williams (Hist. 1—150, 478) has given the particulars respecting a considerable number of frogs which were dug up in Windsor, Castleton and Burlington, at depths of from 5 to 30 feet below the surface of the ground. A number of these dug up in Burlington were preserved in spirits in the museum of the University, where I frequently saw them, and although they were all lost when the college edifice was burnt, in 1824, I think I can safely say from present recollections, that they were all of the species *Rana hallowellii*, which is at present our most common species. In 1822 a living frog was dug up in Bridgewater, at the depth of 30 feet from the surface of the ground.

WOODS FROG.

HORICON FROG.—BLACK FROG.

PICKERING'S HYLODES.

legs: nose pointed; eyes prominent; iris dark golden; tympanum small and nearly the color of back; a brownish line from the snout to the eyes; tubercles on the lower surface of the toes at the joints. Length of the head and body 3 inches.

HISTORY.—This prettily marked frog bears considerable resemblance to the preceding species, and like it varies, in the different specimens, very much in the brilliancy of the colors and the form of the spots. It was named *palustris*, by Le Conte, on account of his finding it about salt marshes, but it is equally common about fresh water streams, ponds and marshes.



THE WOODS FROG.

Rana sylvatica.—LE CONTE.

DESCRIPTION.—Color varying from light drab to reddish brown above and whitish beneath, often with rusty patches in the young; a longitudinal black line commences at the point of the nose, and, widening as it extends backward so as to involve about two thirds of the eye and the whole of the tympanum, terminates at the shoulder; usually a fine black line along the margin of the upper lip, with a yellow line separating it from the vitta passing through the eye; hind legs with broad, obscure, blackish, transverse bands. Length when fully grown about 3 inches.

HISTORY.—This frog is found in all parts of the state, and, though frequently met with in moist meadows, is much more common in woods, and hence its name, Woods Frog. This, like the Leopard Frog, is often seen at a great distance from any water. It varies greatly in the intensity of its general colors, varying from nearly black to light reddish brown or almost white, but is readily distinguished from all the other species by the black vitta or stripe passing through the eye and embracing the tympanum. The young are usually darkest colored and become lighter as they increase in age and size.

THE HORICON FROG.

Rana horiconensis.—HOLBROOK.

DESCRIPTION.—Head large, with snout rather pointed, the whole dusky green above, nostrils lateral, nearer the snout than the orbits, eyes large, prominent, and beautiful, pupil black, iris reticulated, black and golden; tympanum large, bronzed with a light spot in the centre; upper lip light bronze, with dusky bars; above this an indistinct band of bluish white, with black spots, which extends from near the snout under the orbit and tympanum, to the shoulders; lower jaw, chin, and throat white. Body robust, dark olive, interspersed with irregular black spots, with an elevated cuticular fold on each side, of lighter color, from the orbit to the posterior extremities; abdomen silvery white. Anterior extremities dusky above, white below; posterior dark olive above with transverse black bars; posterior part of the thighs granulated and flesh colored, feet dusky, above and below. Length $3\frac{1}{2}$ inches.—Hol.

HISTORY.—This frog was found by Dr. Holbrook, at the outlet of lake George, and, if found there, there can be no doubt of its existence in Vermont. I think I have met with it in Burlington, but at the time supposed it to be the Spring Frog.

THE BLACK FROG.

Rana melanota.—RAFINESQUE.

DESCRIPTION.—Back olivaceous black; a yellow streak on the sides of the head; chin, throat, and inside of the legs whitish with black spots; belly white, immaculate: total length, $2\frac{1}{2}$ inches. Raf.

HISTORY.—I give this on the authority of Rafinesque, who says that it inhabits lake Champlain and lake George.

GENUS HYLODES.—Fitzinger.

Generic Characters.—Mouth furnished with a tongue; teeth in the upper jaw and palate; tympanum visible; extremities slender; tips of the fingers and toes terminating in slightly developed tubercles.



PICKERING'S HYLODES.

Hylodes pickeringii.

DESCRIPTION.—Color varying from yellowish ash to light olive above, with ir-

COMMON TREE TOAD.

PEEPIING TREE FROG.

regular brown markings and numerous small brown spots; hind legs faintly banded with brown; beneath, whitish yellow and granulated; head rather broad; nose blunt; fore feet with four toes, one disposed like a thumb for clasping; hind feet slightly webbed, with five toes, and two tubercles on the heel; all the toes terminated in small tumefactions or soft tubercles; a considerable cavity between the orbits; a dark marking on each side of the head embracing the tympanum. Total length of the head and body about 1 inch.

HISTORY.—I have two fine specimens of this beautiful little animal, both of which I captured in Burlington. The first measures just 1 inch from the snout to the posterior of the body. I captured it in a dry pine grove, October 6, 1840. Though the weather was cool it was very active, and it was with difficulty that I succeeded in taking it. Its leaps were often from four to six feet. It would bound into the air and cling to the small limbs and bushes 4 or 5 feet from the ground. The other I caught in August, 1840, near what is called the High Bridge. The length of the head and body is .8 in.

GENUS *HYLA*.—*Laurenti*.

Generic Characters.—Body is generally elongated, upper jaw and palate furnished with teeth; tympanum apparent, no post-tympanal glands; fingers long, and, with the toes, terminating in rounded viscidous pellets.



THE COMMON TREE TOAD.

Hyla versicolor.—*LE CONTÉ*

DESCRIPTION.—General form like that of the common toad, with the posterior portion more slender. Usual color above, light ash with irregular brownish blotches, frequently cruciform between the shoulders, and commonly two brown bars crossing the thighs and hind legs; belly white and granulated; flanks and under side of the thighs orange; head broad; snout blunt; pupils black; iris golden, reticulated with black, anterior extremities rather small; four toes before and five behind on each foot, all terminated by tumefactions or pellets. Usual length 2 inches.

HISTORY.—The Tree Toad is so called on account of its often being found upon trees, which it climbs by means of the pellets upon its toes. By these it is able to sustain itself upon the smooth surface of a perpendicular pane of window glass. They for the most part remain silent and concealed during the day time, but during warm rainy weather they sometimes become very noisy, and ascend upon logs, fences, and trees, but as they assume very nearly the hue of the object upon which they are situated, they are not readily discovered. They feed and move from place to place mostly by night, but when discovered during the day, they will often suffer themselves to be taken in the hand without making any effort to escape. In their general form they resemble the common toad.



THE PEEPIING TREE FROG.

Hyla squirella.—*Bosc.*

DESCRIPTION.—Form slender; semi-transparent; color brownish red above, with obscure, irregular, brown blotches, bars, and specks on the upper side of the head, body, and legs; chin and throat greenish; belly and under side of the thighs yellowish white, with the flanks and posterior of the thighs light orange, a cuticular fold along each side; eyes small, pupil black, iris golden; a large cavity on the head between the orbits; head broader than long; mouth large, tongue fleshy; minute teeth on the upper jaw and palate; upper jaw margined with whitish; bones of the head very thin and transparent; limbs slender; 4 toes on the anterior and 5 on the posterior feet, all terminated in rose colored pellets; one toe on each fore foot disposed like a thumb for clasping; hind feet palmated. Length of the specimen before me, 1.1 in.; head, .3; thighs, .5; tarsus to the end of the toes, .7; greatest width of the head, .35.

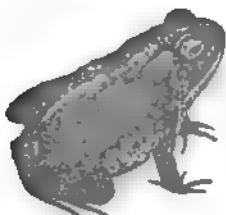
HISTORY.—This species, though not so common as the preceding, is met with in different parts of the state, but is much oftener heard than seen. During the warm summer evenings its shrill peep is heard to a great distance. It ascends trees and is often found concealed between the loose bark and wood of old decayed trees. This species, in its general form, has a-

THE COMMON TOAD.

nearest resemblance to the frogs than to the common toad. The specimen from which my figure and description are made was captured in Burlington.

Genus *Bufo*.—*Laurenti*.

Generic Characters.—Head short; jaws without teeth; tympanum visible; behind the ear is a large glandular tumor, having visible pores; body short, thick, swollen, covered with warts or papillae; posterior extremities but slightly elongated.



THE COMMON TOAD.

Bufo americanus.

Description.—Color of the back and outside of the limbs reddish brown, with brownish blotches edged with black and surrounded by a dull yellowish line, with a light ash colored stripe from the top of the head along the middle of the back to the posterior extremity of the body. Belly dull yellowish white, sprinkled with brown spots. Two very large porous glands back of the eyes. The body above covered with warts or tubercles, the color of the central part of which is usually ferruginous; body beneath granulated. Tympanum small. Eyes brilliant; iris beautifully reticulated with black and golden. Four toes on the anterior feet, five on the posterior, with a hard excrescence forming the rudiment of a sixth toe; hard tubercles on the under side of the feet and toes. Head rather large. Length 3½ in.

History.—The toad, which has been too long looked upon with disgust, and regarded rather as an enemy than a friend, is beginning to be viewed by horticulturists as a benefactor, and there can be no doubt that it renders an essential service by the destruction of noxious insects, and deserves rather to be cherished than driven from cultivated grounds. During the day the toad usually sits motionless in some retired, obscure place, watching for flies and other insects, and when any one approaches within suitable distance, he suddenly darts out his tongue, to which the insect adheres, and he seldom fails of returning it to his mouth with

THE SALAMANDER FAMILY.

the prey attached to it. During the night they venture abroad, and are often met with in large numbers in places where few if any are to be found in the day time.

II.—SALAMANDER FAMILY.

Genus *Salamandra*.—*Brongniart*.

Generic Characters.—Body elongated; tail long; extremities four; fingers four; toes five; no tympanum; numerous small teeth in the jaws and palate; tongue as in frogs; no sternum; ribs rudimentary; pelvis suspended by ligaments.

This genus comprehends those animals which are generally known by the name of efts and newts.



SYMMETRICAL SALAMANDER.

Salamandra symmetrica.—*HARLAN*.

Description.—Color brownish orange above, bright orange beneath; on each side of the spine a row of from three to seven ocellated spots of beautiful vermilion color, with the surrounding circle black; the sides and under parts of the body sprinkled with minute black points, extending from the chin to near the extremity of the tail; head flattened; nose blunt; eyes bright and not very prominent, with two longitudinal ridges between them; four toes on the fore feet, five on the hind; skin on the body and legs roughened by minute tubercles. The specimen before me has six ocellated spots on each side of the spine, and measures 3.3 inches. Length of the tail, which is cylindrical, next the body, and flattened vertically towards the extremity, 1.7 inches.

History.—This species of Salamander is frequently met with in different parts of the state, but is less common than several of the following species. It exists throughout the United States, from Maine to Florida. It is found in water, under old logs in moist places, and is sometimes seen crawling abroad on the wet ground after a shower. Its motions are rather moderate. It feeds upon spiders and small insects.

MANY-SPOTTED SALAMANDER.

Salamandra dorsalis.—*HARLAN*.

Description.—General color olive above, with a slight tinge of green, and varying from sulphur yellow to reddish orange beneath; a row of ocellated vermilion colored spots, with a blackish halo on each side of the dorsal line, which va-

THE SALAMANDERS.

THE SALAMANDERS.

ry in number and size in different individuals; the whole surface of the body, limbs and tail thickly sprinkled with minute black dots. The head is short, rather broad behind, and pointed at the snout, with the nostrils near the extremity; eyes rather prominent, pupils black, iris light yellow; tail roundish at the base, then compressed laterally through its whole length, and very thin at the extremity; fore legs and feet small and delicate, with 4 small toes; hind legs nearly twice as large, with 5 toes. Length of the largest of two specimens before me, 3.7 inches; head and neck .6; body 1.1; tail 2.

HISTORY.—This is one of the most common species of Salamander in Vermont, and is eminently aquatic, spending nearly all the time in the water. When kept in a vessel of water it rises to the surface every few minutes for the purpose of taking in air. It is an animal of considerable activity, and its movements are often very sudden. It is perfectly harmless, and usually manifests much anxiety to conceal itself from view. This salamander seems to be much annoyed by a species of parasitic animals. One of the specimens before me has at least 20 upon it at this moment. They are soft animals, resembling a snail in appearance, but more pointed at the two extremities. They move in the manner of caterpillars, by reaching forward and then bringing up its posterior. They fasten themselves upon the salamander by their mouths, in the manner of the lampreys or bloodsuckers, and adhere with such force as not to be easily separated. The animal upon which they are fastened seems to be in much agony, and frequently struggles, but in vain, to rid himself of them. When fully extended they measure one third of an inch. On being taken from the water, they die as soon as the water which adheres to them is evaporated.



SALMON-COLORED SALAMANDER.

Salamandra salmones.—STORER.

DESCRIPTION.—Color yellowish brown above, salmon color at the sides, with a bright salmon-colored line from the nostril to the upper part of the orbit; upper jaw pale salmon color, with a few brown spots; lower jaw, and body beneath whitish; light salmon color beneath the tail.

Head large and flat; snout obtuse; nostrils small; a strongly marked cuticular fold upon the neck; eyes remote and very prominent; pupil black; iris copper-colored; body elongated and cylindrical; posterior extremities twice the size of the anterior. Tail longer than the body, rounded at the root, compressed laterally and pointed at the tip. Length $6\frac{1}{2}$; tail beyond the vent $2\frac{1}{2}$.—STORER.

HISTORY.—This species was first described and named by Dr. Storer, of Boston, from a specimen found by Dr. Binney, in Vermont, and his description, with a figure, was published in Dr. Holbrook's Amer. Herpetology, Vol. III—101. A description is also given in Dr. Storer's Report, p. 248. I have a specimen of this salamander, taken in Bridgewater, but as it is not fully grown I give Dr. Storer's description. It is found upon moist lands.



THE TIGER SALAMANDER.

Salamandra tigrina.—GREEN.

DESCRIPTION.—Color blackish above, marked irregularly and thickly with roundish, oblong and angular yellow spots of different sizes; belly brownish gray; legs the same color as the body, with a few yellow spots on the outside. Head rather large; snout rounded; eyes black and prominent; four toes on the fore feet, 3d the longest; 5 on the hind feet, 3d and 4th longest; hind legs about twice the size of the fore legs; a distinct cuticular fold under the throat; tail longer than the body, roundish at the base, but soon becoming flattened, and edged towards the extremity and terminated in a flattened point. Hind legs midway between the snout and the extremity of the tail.—Length of the specimens before me 3 in., but it grows larger.

HISTORY.—This Salamander is frequently met with in Vermont, living in swamps and marshes. I obtained 3 good specimens of this species from the stomach of a Ribband Snake, *C. saurita*, besides some others which were partly digested. The snake from which they were taken measured about 2 feet, and the salamanders 3 inches. On the 4th of August, 1842, I caught with a scoop-net more than a dozen salamanders, out of a small muddy pool in Burlington, which I suppose to belong to this species. They were about 3 inches in length, of a brownish yellow color, and most of them were in the larva state, having the fin along

THE SALAMANDERS.

THE SALAMANDERS.

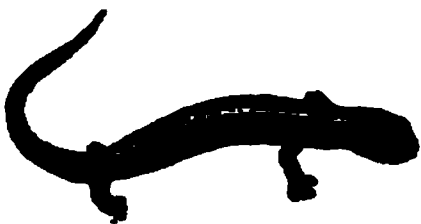
the back, and the branchiæ remaining, but from several of them these appendages had disappeared. I have kept two of the former and one of the latter, in a vessel of water, up to this time, August 17, 1842. The branchiæ and fins have vanished, their color has become quite dark, and the yellow spots are making their appearance very distinctly.

VIOLET-COLORED SALAMANDER.

Salamandra venenosa.—BARTON.

DESCRIPTION.—Color above dark grayish brown, with a row of large roundish bright yellow spots on each side of the dorsal line, which unite into a single row towards the extremity of the tail; several of these spots on the head and upper sides of the legs; color lighter beneath, with some minute white spots; tail roundish at the base, but slightly flattened through the greater part of the length, and terminated in a flattened rounded point; snout bluntly rounded; eyes not very prominent; hind legs midway between the snout and end of the tail. Length of the specimen before me $6\frac{1}{4}$ inches; width across the head .6; across the body .5.

HISTORY.—This large species is not very common in Vermont. The specimen from which my description is made was found in a marshy place in Burlington.



RED-BACKED SALAMANDER.

Salamandra erythronota.—GREEN.

S. erythronota. } GREEN.
S. cinerea. }

DESCRIPTION.—Sides brownish, and often with minute light specks, fading into steel-gray on the belly, usually a broad brownish red stripe along the back; belly dark steel gray, lighter and yellowish towards the chin; head above darker than the body; form slender, cylindrical; tail nearly cylindrical, and longer than the head and body; vent midway between the snout and the extremity of the tail; head broader than the body, short in front of the eyes; snout bluntly rounded; eyes prominent, lively, pupil black, iris golden. A distinct cuticular fold on the throat; legs slender, brownish; toes short, 4 before and 5 behind. Length of the

longest of two specimens before me 3.4 inches; from the snout to the fore legs .5—to the hind legs 1.55; from the hind legs to the point of the tail 1.85; width of the head .2.

HISTORY.—This salamander is quite common in Vermont, and is probably the least aquatic of all our salamanders. It is often met with under the rotten logs on dry pine plains; and also in ledgy places in the hard wood forests, under the loose stones and among the decayed leaves. Its appearance is lively, and its motions often very sudden. Aided by a sudden vibration of the tail, it has the power of leaping several times its length. I have before me two specimens, both found in Burlington, one with a brownish red stripe along its back, and answering to Dr. Green's *S. erythronota*, and the other, which is a little larger, answering to his *S. cinerea*. The stripe on the back seems to be the only difference, and I believe they are now regarded by herpetologists as belonging to the same species.

THE GLUTINOUS SALAMANDER.

Salamandra glutinosa.—GREEN.

DESCRIPTION.—Whole upper part of the body dark brown, sprinkled with distinct light blue spots; sides light colored from the blue spots becoming confluent; abdomen lighter, exhibiting the spots more numerous and distinct than the back; eyes prominent, wide apart, of a deep black color; head flattened above; nostrils small; legs color of the body and spotted like it; anterior feet 4 toed, posterior 5 toed and unusually long; tail, length of the body, much compressed throughout its whole extent, save the extremities, the anterior of which is circular, the posterior pointed. Length 6 inches; head .75; width of the head .5.—Storer.

HISTORY.—This species I have not seen in Vermont. I insert it on the authority of Prof. Adams, who informs me that there is a Vermont specimen of it in the Collections of Middlebury College.

THE TWO-LINED SALAMANDER.

Salamandra bis-lineata.—GREEN.

DESCRIPTION.—Tail longer than the body, tapering, compressed, and pointed; snout oval; back cinereous, with two and sometimes three dark lines, if three, the middle one broadest near the head, and about the length of the body, the lateral ones extending from behind the eyes to the end of the tail; sides cinereous; be-

THE PROTEUS.

THE PROTEUS.

neath whitish or yellowish; anterior toes 4., posterior 5. Length 3 inches.—*Green.*

HISTORY. This salamander I have not seen in Vermont, but Prof. Adams informs me that he has a Vermont specimen which belongs to this species. According to Dr. Green it inhabits shallow waters, appears early in spring, and is very active.

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GENUS *MENOBANCHUS*.—Harlan.

Generic Characters.—Head large, flattened, truncate, two rows of teeth in the upper jaw, a single row in the lower; teeth small, conical, pointed; gills and tail persistent during life.



THE PROTEUS.

***Menobranchus maculatus*.—BARNES.**

DESCRIPTION.—General color dark cinereous gray, produced by minute yellowish specks on a dark bluish ground, and irregularly interspersed with circular spots about the size of a pea, of a darker hue; the throat and central parts of the abdomen nearly white; a brownish stripe commencing at the nose and extending backwards over the eye; the margin of the tail often of an orange tinge, with blackish blotches near the extremity. The head is large, flattened, and the snout truncated; eyes small and far apart; mouth large; throat contracted with a transverse fold in the cuticle beneath; tongue large and fleshy; teeth small and sharp, two rows in the upper jaw and one in the lower. The gills are external, large, and each consists of three delicately tufted or fringed lobes, which, when vibrating in the water, are of a fine blood-red color; body cylindrical, covered with a smooth mucous skin; tail long, flattened and broad vertically, and rounded at the end like that of an eel; legs four, each foot furnished with four toes resembling fingers, but without nails, although the cuticle at the extremities is dark colored, having much the appearance of nails. The total length of the specimen before me, and from which the above figure and description are made, is 12½ inches, and this is about the usual length.

HISTORY.—This singular reptile was first described by Schneider, about the year 1799, from a specimen obtained from

lake Champlain.* This specimen was probably obtained at Winooski falls, which were, for some time, the only known locality of this animal, and where more or less of them are now taken every spring, upon the hooks suspended on night lines for taking fishes. The fishermen formerly considered them poisonous, and when they found them upon their lines they were glad to rid themselves of them by cutting the lines and letting them go with the hook in their mouths; but they are now found to be perfectly harmless and inoffensive. This animal is seldom seen excepting in the months of April and May, and this is the season for depositing its eggs. In a specimen taken on the 13th of April, 1840, I found about 150 eggs of the size of a small pea and, apparently just ready to be extruded. The food of this reptile consists of various kinds of worms and insects. The stomach of the one above mentioned contained two hemipterous insects, each three fourths of an inch long, the wings and bodies of which were entire, besides numerous fragments of other insects. Of the habits of this animal very little is known. It seems to spend the greater portion of the time about falls, concealed in the inaccessible recesses and crevices of the rocks below the surface of the water, and not to venture much abroad excepting at the season for depositing its eggs. Although it passes nearly the whole time in water, it is truly an amphibious animal, having lungs for breathing in the atmosphere, as well as branchiæ for breathing in water. It does not, however, breathe in water by receiving the water into its mouth and passing it out through the gills, in the manner of fishes, but simply by the vibrations of its branchiæ in the water. When kept in a vessel containing a large quantity of water, or in which the water is frequently renewed, it manifests but little disposition to rise to the surface for atmospheric air. But when the quantity of water is small,

* The following is Schneider's description, and our reptile answers to it in almost every particular.

Corpus ultra 8 pollices longum et fere pollicem, crassum, molle, spongiosum, multis poris pervium, in utroque latere tribus macularum rotundarum, nigrarum seriebus variegatum; cauda compressa et anceps, utrinque maculata, inferiore acie recta, superiore curvata, in finem terotiusculum terminatur. Caput latum et planum: oculi parvi, nares anteriores in margine labii superioris, maxillæ superioris geminæ ut inferioris dentes conici, obtusi, satis longi; lingua lata, integra, anterior soluta: apertura oris patit usque ad oculorum lineam verticalem; labia piscium labiis similia; pedes dissiti quatuor, tetradactyli omnes, absque unguiculis; ani rima in longitudinem patet; branchiæ utrinque ternæ extus propendunt, appositæ superne totidem arcibus cartilagineis, quorum latus internum tubercula cartilaginea, velut in piscium genere, exasperant. &c.

PRELIMINARY OBSERVATIONS.

and not often changed, it soon finds the air in the water insufficient for its purpose, in which case it comes to the surface, takes in a mouthful of air, and sinks again with it to the bottom. After retaining the air for a time, probably long enough for the consumption of its oxygen in the lungs, it suffers it to escape through the mouth and gill openings, and it is seen to rise in small bubbles to the surface. This animal is said to be found in several places at the west, particularly in streams falling into lake Ontario, where it is said sometimes to attain the length of two feet. The length of those taken at Winooski Falls varies from 8 to 13 inches. I have never seen one which exceeded 15 inches. The best figure of our animal which I have seen published is in the Annals of N. Y. Lyceum, vol. I, plate 16. The description and figure in Dr. Holbrook's American Herpetology do not

answer to our *Menobranthus*, but as Prof. G. W. Benedict has furnished Dr. H. with an accurate colored figure, drawn from a living specimen by the Rt. Rev. J. H. Hopkins, we hope to see it correctly represented in a future volume of his splendid and valuable work. We are strongly inclined to believe the animal which he describes to be a different species from ours. Notwithstanding what he and others have said in proof of the identity of the *Triton lateralis* of Say, the *Menobranthus lateralis* of Harlan, Holbrook, and others, with the reptile described by Schneider, I am strongly inclined to the opinion that they are different species. I have therefore given the name suggested by Prof. Benedict, and adopted by Barnes, the preference, and have described our animal under the name of *Menobranthus maculatus*, that being descriptive of our reptile, and the other not so.

CHAPTER V.

FISHES OF VERMONT.

Preliminary Observations.

FISHES constitute the Fourth Class of the animal kingdom. They are vertebrated animals, with cold red blood. They respire by means of branchiæ, or gills, and they move in water by means of fins. Their entire structure is as evidently fitted for swimming as that of birds is for flight. The tail is the principal organ of motion, and progression is effected by striking it alternately from right and left against the water. The mean specific gravity of fishes is the same as the fluid in which they live, so that no effort is required to keep them suspended, and a large part of them are furnished with an air bladder, by the compression or dilatation of which they can vary their specific gravity, and thus rise or descend without the aid of their fins.

The head of fishes is usually larger in proportion to the size of the body than that of other animals; and although it is subject to great variety of form, it in almost all cases consists of the same number of bones as is found in other oviparous animals. These bones are separate in young fishes, but in older ones become united and consolidated so as to make it

difficult to distinguish them. The *noses* are simple cavities placed at the front of the snout, and usually double. The cornea of the eye is very flat, and has but little aqueous humor, but the crystalline is hard and globular. The ear of fishes is very obscure, and, having neither eustachian tubes nor tympanal bones, their sense of hearing must be very imperfect. The head is attached to the body in such manner that its motion is exceedingly limited. The tongue varies in different families: in some it is fleshy, but in many cases it is osseous and frequently covered with teeth, so that their sense of taste must be very obtuse. The body of fishes is in most cases covered with scales, which cannot allow much sensibility to the touch. This imperfection is, probably, supplied in some cases by the fleshy cirri, with which several species are furnished. The teeth of fishes vary almost infinitely in number, form and situation. Besides the jaws, they are often found upon the tongue and palate, and not unfrequently in the throat and at the base of the gills, while some families are entirely destitute of them. The stomach is generally simple and the intestines short.

The sexes of fishes are distinguished by

ORDERS OF FISHES,

ORDERS OF FISHES.

the male having a milt and the female a roe. The roe is composed of a multitude of eggs, which the female deposits in some suitable place. After their extrusion, they are impregnated by the male, and left to hatch, without the further aid or care of the parents.

Fishes are long-lived animals, and their fecundity is very remarkable. We have authenticated accounts of a pike having lived 260 years, and a carp 200; and Leuwenhoek computed the number of eggs in the roe of a cod fish to be 3,686,760, and in that of a flounder to be 1,357,400.

In a country like Vermont, situated so remote from the ocean, and watered only by small fresh water streams and lakes, a very great variety or abundance of fish is hardly to be expected; and yet it is a notorious fact, that when the country was new all our waters swarmed with fishes of various kinds. Salmon and Shad were taken in the greatest plenty and perfection in Connecticut river; and the former together with the salmon trout, were abundant in lake Champlain, and in most of the streams connected with it. In the spring of the year, when these fishes were ascending our streams to their breeding places, they could be taken at the falls and rapids in scoop-nets, or in baskets fastened to poles, in almost any quantities desired. Brook trout, weighing from one to three pounds, were plentiful in nearly all our streams and ponds. But with the clearing and settling of the country these kinds of fishes have diminished till the three former have become extremely rare, and the latter, though still numerous in many parts, are seldom taken exceeding half a pound in weight. For the production of this state of things several other causes have operated besides their diminution by fishing. The salmon and shad have probably been driven from our waters, chiefly by the erection of dams across nearly all our streams, which prevent their ascent to their favorite spawning places. Freshets, also, which have become more sudden and violent since the country has become cleared, have swept out the logs and other obstructions, which formed their places of resort and concealment, and have thus tended not only to diminish the number of our fishes, but to prevent their attaining so great magnitude as formerly. Those fishes of our lakes which do not ascend far up our streams to deposit their spawn, have not been so much affected by these causes. These, however, though still taken in considerable quantities, are not so abundant as formerly.

Cuvier divides fishes into two sub-classes. I. *Osseous Fishes*, or such as have hard, solid bones. II. *Cartilaginous Fishes*, or such as have cartilage in the place of bones. Most of our fishes belong to the first of these divisions. The following is a Catalogue of Vermont Fishes, arranged in the order in which they are described in the subsequent pages.

I. OSSEOUS, OR BONY FISHES.

ORDER I.—ACANTHOPTERYGII.

Family I.—Percidæ.

- Perca serrato-granulata*, Common Perch.
Lucio-Perca americana, Pike Perch.
Pomotis vulgaris, Common Sun Fish.
 " *megalotis*, Big Eared Sun Fish.
Centrarchus æneus, Rock Bass.
 " *fasciatus*, Black Bass.
Etheostoma caprodes, Hog Fish.

Family II.—Scienidæ.

- Corvina oscula*, Sheep's Head.

ORD. II.—MALACOPTERYGII ABDOMINALES

Family I.—Cyprinidæ.

- Catostomus cyprinus*, Carp Sucker.
 " *oblongus*, Lake Mullet.
 " *teres*, Sucker.
 " *nigricans*, Black Sucker.
 " *longirostrum*, Long Nosed Sucker.
Leuciscus pulchellus, Common Dace.
 " *crysolenus*, Shiner.
 " *atrasus*, Brook Minnow
Hydrargyra fusca, Mud Fish.

Family II.—Esocidæ.

- Esox estor*, Common Pike.
 " *reticulatus*, Pickerel.

Family III.—Siluridæ.

- Pimelodus vulgaris*, Horned Pout.
 " *nebulosus*, Bull Pout.
 " *canosus*, Cat Fish.

Family IV.—Salmonidæ.

- Salmo salar*, Salmon.
 " *namaycush*, Namaycush, or Longe.
 " *fontinalis*, Brook Trout.
Osmerus eperlanus, Smelt.
Coregonus albus, White Fish.

Family V.—Clupidæ.

- Alosa vulgaris*, Shad.
Hiodon clodius, Winter Shad.
Lepisosteus oxyurus, Bill Fish.
 " *lineatus*, Striped Bill Fish.

ORD. II.—MALACOPTERYGII SUBBRACHIATI

Family, Gadidæ.

- Lota maculosa*, Ling.
 " *compressa*, Eel-pout.

ORDER IV.—MALACOPTERYGII APODES.

ORDERS OF FISHES.

THE PERCH.

Family, *Murenida*.

- Murena vulgaris*, Common Eel.
 " *bostoniensis*, Black Eel.
 " *argentea*, Silver Eel.

II. CARTILAGINOUS FISHES.

Family I.—*Sturionida*.

- Acipenser rubicundus*, Round Nosed Sturgeon.
 " *oxyrinchus*, Sharp Nosed Sturgeon.

Family II.—*Cyclostomida*.

- Petromyzon nigricans*, Blue Lamprey.
Ammocetes concolor, Mud Lamprey.

I. OSSEOUS, OR BONY FISHES.

ORDER I.—ACANTHOPTERYGII.

Spinous rayed Fishes.

Fishes of this order are recognized by the spines which occupy the place of the first rays of the dorsal fin, or the rays of the first dorsal when there are two. Sometimes, instead of a first dorsal, there are only a few free spines.

I. PERCIDÆ, OR PERCH FAMILY.

GENUS PERCA.—Cuvier.

Generic Characters.—Two separate dorsal fins; rays of the first spinous; tongue smooth; teeth in both jaws, in front of the vomer, and on the palatine bones; preoperculum notched below and serrated on the posterior edge; operculum bony, ending in a flattened point directed backwards; branchial rays seven; scales rough, hard, and not easily detached.



THE COMMON PERCH.

Perca serrato-granulata.—Cuv.

Cuv. et Val. Hist. Nat. des Poiss., II—47.

DESCRIPTION.—Body deep and thick, but becoming slender and nearly cylindrical towards the tail; head rather small, and tapering towards the snout; both jaws and palate covered with small teeth; color greenish, or yellowish brown above; sides yellow, crossed by 7 transverse brownish bands; belly white; lateral line parallel to the curve of the back; tail concave. Preoperculum narrow, and its edge armed with small spinous teeth, those on the lower margin larger, with their points directed forwards; the operculum radiated with granulated rays, terminating posteriorly in a spine, with several spinous denticulations beneath, and

grooves extending forward from them. The edges of the inter-operculum and sub-operculum are finely serrated, and the latter is prolonged into a membranous point lying under the spine of the operculum. Humeral bones grooved and usually serrated. Jaws equal; eyes rather large; iris yellowish; dorsal and caudal fins brownish; pectorals orange on the lower part; the others more or less ruddy. The first dorsal more than twice as long as high, with a black spot or clouded with black towards the posterior part, the second two thirds as long as the first. Depth of the body to the total length of the fish as 1 to 4. Length of the specimen before me 12 inches, depth 3, thickness 2.

Rays, B. 7, P. 0, V. 1½, D. 13½, A. 2½, C. 17.*

HISTORY.—The Yellow Perch is one of the most common fishes found in lake Champlain, and in the mouths of the rivers falling into this lake. They are taken both with the seine and hook, but chiefly with the latter. In the winter they are caught by cutting holes in the ice. They vary from 8 to 12 and even 14 inches in length, and are carried round for sale from house to house in the villages along the lake, at all seasons of the year, neatly scaled and dressed ready for cooking. In this condition they are sold at from 10 to 20 cents a dozen, according to the season and their abundance. The flesh of the Perch is white, firm and agreeable to the palate, but is rather dry and bony.

This fish agrees throughout with Dr. Mitchell's description of his *Bodianus flavescens*, and is undoubtedly the species from which his description was drawn. Cuvier, having obtained specimens of this and another species which very closely resemble it, from the waters of the United States, gave to this species the name of *P. serrato-granulata*, on account of its serrated and granulated gill covers; to the other, distinguished from this by the want of granulations, by its smaller size and greater number of brown bands upon its sides, he gave the name of *P. flavescens*.

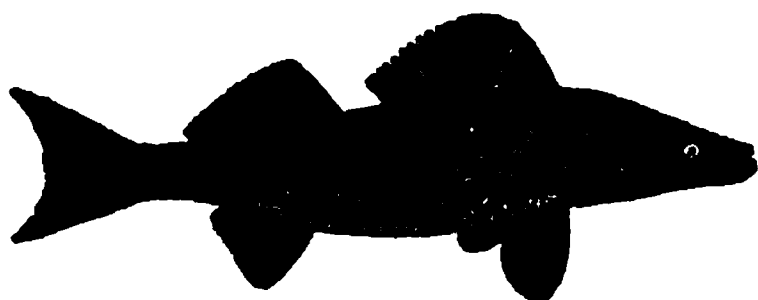
GENUS LUCIO-PERCA.—Cuvier.

Generic Characters.—In the form of the body and situation of the fins like a Perch; head more like a Pike; edge of the pre-operculum with one simple emargination; some of the maxillary and palatine teeth long and pointed.

* The letters indicate the fins, and the figures the number of rays in each; B. Branchial rays; P. Pectoral; V. Ventral; D. Dorsal; A. Anal, and C. Caudal.

THE PIKE-PERCH.

THE SUN FISH.



AMERICAN PIKE-PERCH.

Lucio-Perca americana.—CUVIER.

Ouv. et Val. Hist. Nat. des Poiss. III. p. 122, pl. 16.
Fauna Boreali Americana, Fishes, p. 10.

DESCRIPTION.—Body tapering and cylindrical towards the tail; color nearly black above, sides brown and orange, belly yellowish or bluish white, tail and fins spotted with black on a yellow ground, but varying much in different individuals; head depressed; eyes large, pupil transparent, iris yellow; lower jaw longer than the upper; two rows of teeth in the upper jaw and one in the lower; teeth hooking inward and many of them long; operculum terminated by a membranous point, preoperculum serrated and spinous at the angle; a bony plate over the pectoral fin; rays of the first dorsal fin spinous.

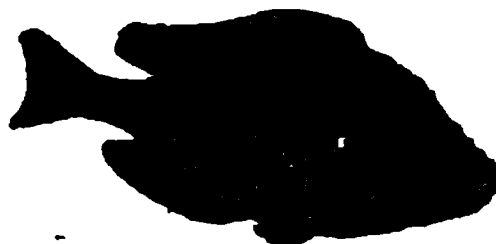
Rays, Br. 7, P. 13, V. 6, D. 14—21, A. 14, C. 17.

HISTORY.—The usual length of this fish is from fourteen to twenty inches, and its weight from one to four pounds. It is taken very plentifully from the waters of lake Champlain and its tributaries. It is a firm, bony fish, but as the bones are large and easily separated from the flesh, they are much less troublesome than in the Perch, and some other species. Its flesh is well flavored, though not so juicy and rich as that of our White Fish and some few others. In the form of its body and the situation of its fins, it closely resembles the Perches, but its head and teeth are more like the Pikes, and hence its name, *Lucio-Perca*, or *Pike-Perch*. This fish is called by Dr. Williams, in his History of Vermont, the *White Perch*, but is generally known in Vermont simply by the name of *Pike*, while the fish usually called *Pike* in other places is here called *Pickarel*. This fish, on the contrary, is called *Pickarel* in Canada. We have another species of this genus, probably the *L. canadensis*, but I am unable to say so positively at present.

GENUS POMOTIS — Cuvier.

Generic Characters.—A single dorsal fin; 6 gill rays on each side; teeth small and crowd-

ed; body compressed and oval; a membranous prolongation at the angle of the operculum.



SUN FISH, OR POND PERCH.

Pomotis vulgaris.—CUVIER.

Shaw's Zoology, IV—482. Lit. and Phil. Trans. N. Y., 1—403. Fauna Boreali Americana, p. 23. Storer's Report, p. 11.

DESCRIPTION.—Color brownish green above; below yellow; sides bluish, spotted with brownish, amber, and dark purple; sides of the head striped longitudinally with undulating deep blue lines, with amber spots; a large black spot, edged with silvery above and below, on the posterior angle of the operculum and its skinny prolongation, terminating backward in bright scarlet; all the fins brownish, portions of the dorsal and caudal spotted finely with black; head between the eyes smooth, dark green, with 3 pores, or pits, the lines connecting which form very nearly an equi-lateral triangle; teeth minute and sharp in both jaws; upper jaw protractile; under jaw longest; mouth small; nostrils double, with a pore, making it appear triple; eyes large and round; back regularly curved from the nape to the posterior of the dorsal fin; lateral line parallel to the curve of the back. Depth of the body to the total length of the fish, as 1 to 3, nearly; commencement of the anal fin equi-distant from the two extremities; usual length about 5 inches.

Rays Br. 6, P. 13, V. 1½, D. 9½, A. 3½, C. 17.

HISTORY.—This is a very common fish in the coves along the margin of lake Champlain, and about the mouths of our rivers. Though extensively known by the name of *Sun Fish*, and *Pond Perch*, it is, perhaps, more generally known by the name of *Pumpkin Seed*. It is also sometimes called *Bream*. This fish, though said in Jardine's Naturalists' Library to be of unobtrusive colors, is one of the highest colored and most beautiful fishes found in our waters—'oftentimes vying in brilliancy with the tropical fishes.' The Sun Fish, though often taken with other fishes in the seine, is more commonly taken with the hook, at which it bites with avidity. Its flesh is white and palatable, but the fish being small, thin, and bony, is little sought as an article of food.

THE BIG-EARED SUN FISH.

THE ROCK BASS.

THE BLACK BASS.



THE BIG-EARED SUN FISH.

Pomotis megalotis.—RAVINESQUE.

Icthyologia Chilensis, p. 28.

DESCRIPTION.—Color brownish olive above, head darker; sides approaching to chestnut; belly coppery, or ruddy white; sides of the head and body with flexuose greenish, or bluish stripes and spots. Membranous prolongation of the operculum very long and wholly black; eyes dark, the pupils being black, and iris brown. Tail and fins brownish. All the colors less brilliant than in the *Pomotis vulgaris*, its mouth proportionably larger, its tail less forked, and its pectorals broader and less pointed. Depth contained a little more than twice in the total length. Length of the specimen before me $4\frac{1}{2}$ inches, depth 1.9, height of the pectoral 0.9, length of the black portion of the prolongation of the operculum 0.4.

Rays, B., P. 4, V. 1 $\frac{1}{2}$, D. 10 $\frac{1}{2}$, A. 3 $\frac{1}{2}$, C. 18.

HISTORY.—The specimen from which the above figure and description were drawn, was taken in Connecticut river at Barnet. It bears considerable resemblance to the preceding species, and is there known by the same vulgar names. It may however readily be distinguished by the greater prolongation of the black membranous portion of the gill cover, and the absence of the scarlet termination, as well as by its greater depth in proportion to the length, its nearly even tail, deeper cleft mouth, and its broader and less pointed pectoral fins.

GENUS CENTRARCHUS.—Cuv. at P&L.

Generic Characters.—Body oval, compressed; one dorsal fin, tooth like velvet pile, on the jaws, front of the vomer, palatine bones and the base of the tongue; preoperculum entire; angle of the operculum divided into two flat points; anal spines from 3 to 9.



THE ROCK BASS.

Centrarchus aeneus.—CUVIER.

Cichla aeneus, Le Sueur Jour. Ag. Sc. Phil. II, p. 214.
Centrarchus aeneus, Cuv. et Val. iii, pl. 48.—FAUNA
Boreali Americana (Fishes) p. 18.

DESCRIPTION.—Form elliptical; body deep and thin. Back dark; sides yellowish, approaching to white on the belly; a quadrangular black spot in the centre of each scale, giving the sides a striped appearance from the gill-opening to the tail. Scales large on the sides, with the exposed part circular, and the concealed part finely grooved and truncated at the base; smaller on the back, belly, cheeks and operculum; lateral line parallel to the curve of the back, containing 42 scales; opercula scaled, preoperculum serrated at the angle; the operculum terminates backward in two thin lobes, with an acute notch between, and a dark colored membranous prolongation; plate above the pectoral smooth. Teeth small and thick like velvet pile in both jaws, on the vomer, and on the edges of the palatine bones. Eyes large and dark. Vent anterior. Ventral fins directly under the pectorals; anal commences under the 8th spinous ray of the dorsal; dorsal and anal expanded posteriorly. The first ventral, the first twelve dorsal, and the first six anal rays spinous. Length of the specimen before me $7\frac{1}{2}$ inches, from the snout to the vent $3\frac{1}{2}$;—to the posterior margin of the operculum $2\frac{1}{2}$; depth $2\frac{1}{2}$, and contained near twice and a half in the total length.

Rays, Br. P. 14, V. 1 $\frac{1}{2}$, D. 12 $\frac{1}{2}$, A. 6 $\frac{1}{2}$, C. 17.

HISTORY.—This fish is here known by no other name than Rock Bass. It is quite a common fish in lake Champlain, and its larger tributaries. It is usually taken with the hook along the precipitous rocky banks of the lake and rivers, and from this circumstance it derives its name. It is considered a very good fish for the table, and its weight is usually about half a pound.



THE BLACK BASS.

Centrarchus fasciatus.—LE SUEUR.

Cichla fasciata, Le Sue. Jour. Ag. Sc. Phil. II, p. 214.

DESCRIPTION.—Form somewhat elliptical, compressed, a little convex on the sides, and pointed forwards. Color dark greenish above, lighter and faintly mottled on the sides, and grayish white beneath; sides of the head fine, light green;

THE BLACK BASS.

THE HOG FISH.

scales firm, moderate on the sides and operculum, but very small on the cheeks, back of the neck, throat and belly. *Preoperculum* with its upper limb nearly vertical and nearly at right angles with the lower, without spines or serratures; interoperculum and suboperculum scaly upon the upper side, and smooth below; operculum triangular, with a membranous prolongation posteriorly, and the bony part terminating posteriorly in two thin lobes, with a deep notch between them, the lower lobe, which is largest, ending in several short spines; teeth small, sharp and numerous in both jaws, on the lower anterior edges of the palatine bones, and on the vomer with a small cluster near the base of the triangular tongue, all standing like the pile on velvet, but hooking a little inward, those on the jaws largest. *Fins* small, brownish, and their soft parts covered with a rather thick mucous skin; the dorsal rounded behind, low at the junction of the spinous and soft parts, and the spinous rays capable of being reclined, imbricated and concealed in a longitudinal groove along the back; ventrals a little behind the pectorals; the anal under the posterior portion of the dorsal, and extending a little further back; tail slightly emarginate, with the lobes rounded. Vent a trifle nearest the posterior extremity; eyes moderately large; lower jaw a trifle longer than the upper, with several visible pores along its margin. Length of the specimen before me 19 inches; the greatest depth equals one third of the length, exclusive of the tail.

Rays Br. 6, P. 17, V. 15, D. 10-15, A. 3-11, C. 17.

HISTORY.—The Black Bass, by which name this fish is here generally known, ranks as one of the best fishes taken from our waters; but, as is apt to be the case with good fishes, it is much less abundant than several other species which are greatly its inferior in point of quality. It is usually taken with the seine, and its weight varies from one to five or six pounds.

GENUS *ETHEOSTOMA*.—*Rafinesque*.

Generic Characters.—Body nearly cylindrical and scaly; mouth variable with small teeth; gill cover double or triple, unserrate with a spine on the operculum, and without scales; branchial rays six; rays in the ventral six, one of which is spiny, no appendage; dorsal more or less divided into two, with all the rays of the anterior portion spiny; vent nearly medial.



THE HOG FISH.

Etheostoma caprodes.—*Raf.*

Rafinesque Ich. Ohiens. p. 38. *Kirt. Rep. Zool. Ohio*, p. 163. *Boston Jour. Nat. His.* III—346.

DESCRIPTION.—Body lengthened and cylindrical; head elongated, flattened on the forehead, with the snout protruded and rounded like that of the hog; under jaw narrower and shorter than the upper; mouth beneath, small. Color yellowish, darkly spotted and barred with brown above and on the sides; belly yellowish white; 10 brown bars or blotches on the sides, the posterior one at the base of the tail black, with about 20 less distinct bars above and between these passing over the back; caudal and dorsal fins finely spotted or barred with brown; pectoral, ventral and anal transparent, unspotted and yellowish; posterior part of the head above nearly black, but lighter towards the snout; eyes middling size, prominent; pupil black, surrounded by a bright line and a yellowish silvery iris; tail slightly lunated; scales ciliated and rough; operculum terminated posteriorly in a sharp spine; minute teeth in both jaws and on the vomer; lateral line straight; ventrals behind the pectorals and under the anterior part of the second dorsal. Length 3.2 inches; pectoral fin as long as the head.

Rays, Br. 6, P. 14, V. 6, D. 14-14, A. 12, C. 17.

HISTORY.—This fish, though its vulgar name might be thought to imply the contrary, is certainly one of the most symmetrical and beautiful fishes found in our waters. It received the name of *Hog Fish* from a resemblance in the form of its snout and lower jaw to those of that quadruped. It is quite common in the mouths of the streams which fall into lake Champlain, but being a slender fish, and never exceeding 4 or 5 inches in length, no account is made of it as an article of food, and very little is known of its habits. It swims low in the water, and when at rest usually lies at the bottom.

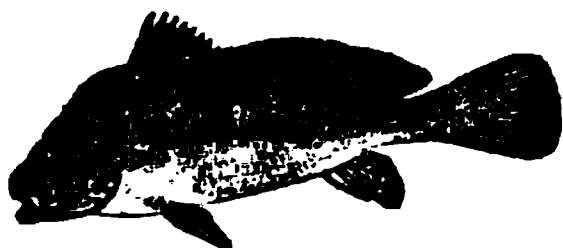
II.—SCIENIDÆ OR SCIENA FAMILY.

GENUS *CORVINA*.—*Cuvier*.

Generic Characters.—Head gibbous, cavernous, and scaly; stones in the sack of the ear very large; no canine nor palatine teeth; all the teeth

THE SHEEP'S HEAD.

small and crowded; preoperculum dentated; branchial rays seven; anal fin short, with the second spine robust and strong.



THE SHEEP'S HEAD.

Cervina oscula.—LE SUEUR.

Scienc. oscula, Le Sueur, Jour. A. N. Sci., ii, p. 252.

DESCRIPTION.—Back elevated; body deep, thick through the abdomen, and compressed to an edge along the back, and slender near the tail; head declining; snout short, rounded, with three small openings at the end, and large pores near the tip of the lower jaw; mouth rather small, lips distinct; teeth in both jaws conic and crowded, the outer series largest; eyes large, round, and near the snout; nostrils double, the posterior much the largest, and very near the eye; head and opercula covered with scales; preoperculum coarsely serrated; base of 2d dorsal, pectoral, anal and caudal fins covered with scales; the 9 rays of the first dorsal, 1 ray of the 2d dorsal, the first ventral and two first anal rays, spinous; the 1st dorsal and 1st anal spine very short, the 2d large and stout; scales rough. Color brownish gray above, sides silvery, and pearly white, or cream color, beneath; head with livid purple reflections; dorsal, pectoral, anal and caudal fins brownish; ventrals yellowish; lateral line parallel to the arch of the back, and visible on two-thirds of the length of the tail; tail rounded; height of the second dorsal nearly uniform, the posterior reaching the base of the caudal; depth of the fish contained 3 times in the total length. Length of the specimen before me $17\frac{1}{2}$ inches; greatest depth just behind the pectorals $5\frac{1}{2}$.

Rays Br. 7, P. 16, V. 15, D. 9—131, A. 28, C. 18.

HISTORY.—This fish is quite common in lake Champlain, and is here generally known by the name of Sheep's Head. It is also found in the western lakes and the Ohio river, where it is more commonly called the White Perch. This fish, taken from the Ohio river, is said to be fat, tender, and well flavored; but ours is lean, tough, and bony, and seldom eaten. It received its vulgar name from its resembling in appearance the *Sargus ovis*, which is also called Sheep's Head on account of its 'arched nose and smutty face;' but the resemblance is in appearance only, for while the latter is consid-

THE CARP SUCKER.

ered one of the most delicious fishes for the table, the former is seldom carried to the table.

ORD. II—MALACOPTERYGII ABDOMINALES.

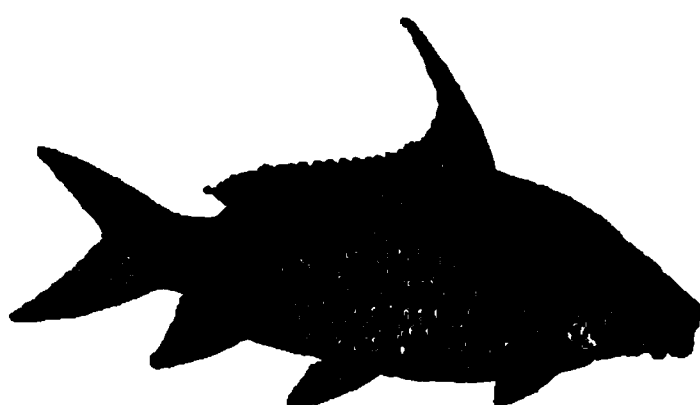
Soft rayed abdominal fishes.

The Malacopterygii are distinguished by having nearly or quite all of the fin-rays soft and branching as in the trout, and the order abdominales embraces the soft-rayed fishes, whose ventral fins are situated far back upon the abdomen, as in the trout, sucker and pickerel.

I.—CYPRINIDÆ. OR CARP FAMILY.

GENUS CATASTOMUS.—LE SUEUR.

Generic Characters.—Back with a single dorsal fin; gill membrane three rayed; head and opercula smooth; jaws toothless and retractile; mouth beneath the snout; lips plaited, lobed, or carunculated, suitable for sucking; throat with pectinated teeth. This Genus embraces the Suckers of the United States, of which there are about 20 species.



THE CARP SUCKER.

Catastomus cyprinus.—LE SUEUR.

Jour. Acad. Sci. Phil., vol. I. p. 91, plate.

DESCRIPTION.—Form gibbous; back arched, thin and sharp; belly thick and flattened between the pectoral and ventral fins. Head small and sloping; snout short; eyes rather small, pupil black, iris golden yellow; nostrils large and double; mouth small and lunated. Color light silvery brown, with golden reflections above, approaching to yellowish white, or cream color below. Scales very large, excepting along the base of the dorsal fin, of a semi-rhomboidal form, and beautifully radiated; the lateral line first bends downward, then nearly straight; 40 scales on the lateral line and 13 in the oblique row, extending from the beginning of the dorsal to the middle of the ventral fin. Fins brownish flesh-color, all the rays coarse; the dorsal commences at the highest part of the back, a little forward of the ventrals, and terminates nearly

* This species was removed by Cuvier from the genus *Catastomus*, of Le Sueur, to his own sub-genus *Labes*, which is distinguished from the *Catastomus* by the greater length of the dorsal fin.

THE LAKE MULLET.

over the middle of the anal, three or four of the first rays being much elongated, the others short; the anal fin slightly lunated, the caudal forked with pointed lobes. The swimming bladder divided in three sacks, connected by tubes. Length of the specimen before me from the snout to the extremity of the tail 16 inches,—to the tail 13, to the vent 10,—to the middle of the gill opening $3\frac{1}{2}$; greatest depth 5; greatest thickness $2\frac{1}{2}$; height of the front part of the dorsal $4\frac{1}{2}$; length of the dorsal 5, scale on the side .8 by .7.

Rays, Br. 3, P. 16, V. 10, D. 28, A. 9, C. 18.

HISTORY.—This fish, though said to be common further south, is only occasionally taken in our waters, and here varies from 1 to 3 or 4 pounds in weight. It is considered a very good fish for the table, but like the others in this family it is wanting in firmness.



THE LAKE MULLET.

Catostomus oblongus.—MITCHELL.

Cyprinus oblongus.—Mitchell. Trans. Lit. and Phil. Soc. of N. Y., I—459.

DESCRIPTION.—Form gibbous; back arched; body deep and thick; head short and smooth; mouth under, small and toothless; gill openings narrow. Color above dark brown, lighter with bronzy reflections on the sides, and dirty cream-color beneath; scales large with radiating striæ, and arranged in about 13 longitudinal rows on each side; lateral line medial and nearly straight, but not very conspicuous. Dorsal fin brownish, the other fins lighter and usually more or less ruddy; pectorals, situated low and far forward upon the throat; ventrals under the middle of the dorsal; the anal reaching the base of the caudal; tail deeply forked; swimming bladder in three sacks connected by tubes. Length of the specimen before me 25 inches, depth in front of the dorsal 6, thickness 3, height of the dorsal 3.2. Weight $6\frac{1}{2}$ lbs.

Rays, B. 3, P. 17, V. 9, D. 16, A. 9, C. 18.

HISTORY.—This fish is described by Dr. Mitchell under the name of the *Chub of New York*. It is here very generally known by the name of *Mullet*, under which name several species of lake suck-

THE SUCKER.

ers are confounded, although it belongs to a family of fishes entirely distinct from the real Mullet. This is one of our most common fishes, and in the spring and early part of summer is caught with the seine in large quantities, both in lake Champlain and in the mouths of its larger tributaries. The flesh of this fish is rather soft, and is considerably filled with the knots of fine bones so common to this family, and yet it is regarded as a very good fish for the table. There are various methods of cooking it, but it is generally most highly esteemed when baked. The fish grows to a larger size, and is taken in lake Champlain in larger quantities than any other species of this family. Their usual length is from 15 to 20 inches, and their weight from 2 to 5 pounds. But individuals are often taken which are much larger, weighing, in some cases, 9 or 10 pounds. The usual price, when fresh, is from 3 to 4 cents a pound.

THE SUCKER.

Catostomus teres.—MITCHELL.

Cyprinus teres.—Mitchell. Trans. Lit. and Phil. Soc. of N. Y., I—459.

DESCRIPTION.—Body lengthened, thick and subcylindrical, the head one-sixth the total length; color blackish brown above, darkest on the head, often tinged with green; sides brownish, often with golden reflections from the scales; belly white, and sometimes yellowish; dorsal and caudal fin brown; the other fins ruddy, or yellowish brown. Head rather small, and with the cheeks and opercula smooth; eyes small, iris golden, but very dark in some specimens; nostrils large, double and very near the eye in front. Scales of middling size, radiated, with 17 in the oblique row extending from the anterior base of the ventral to the posterior ray of the dorsal, the middle scale being crossed by the lateral line which is straight in the middle of the body, and contains 61 scales. Pectoral fins situated very near the gills, the dorsal on the middle of the back, and about as long as high; the ventrals rather small, under the middle of the dorsal; the anal far back, reaching the base of the caudal, and its length contained $2\frac{1}{2}$ times in its height; the tail forked; all the fin rays coarse, particularly those of the anal fin. The swimming bladder in two sacks connected by a tube. Length of the specimen before me $22\frac{1}{2}$ inches, from the snout to the posterior edge of the gill covers 4.4, from the gill to the base of the tail along the lateral line 15. Its greatest depth 5.4, thickness 3, and its weight $5\frac{1}{2}$ lbs.

THE BLACK AND LONG-NOSED SUCKERS.

THE DACE.

Rays, Br. 3, P. 18, V. 10, D. 13, A. 8, C. 18.

HISTORY.—This is generally known on the west side of the Green Mountains by the name of Sucker, or Black Sucker, while another species is known by the same names on the east side of the mountains. This fish is quite common in lake Champlain, and in most of the large streams and ponds connected with it.

THE BLACK SUCKER.

Catostomus nigricans.—LE SUEUR.

Jour. Acad. Nat. Science, I—102. Storer's Report, Fishes of Mass., p. 86.

DESCRIPTION.—Color of the back black; sides reddish yellow with black blotches; beneath white, with golden reflections; scales moderate in size; head quadrangular, one fifth the length of the fish; top of the head of a deeper black than the body; eyes moderate, oblong; pupils black; irides golden; mouth large; corrugations of the lips very large, particularly those of the lower lip; lateral line, rising back of the operculum on a line opposite the centre of the eye, makes a very slight curve downwards and then pursues nearly a straight course to the tail, and contains 60 scales; back between the head and dorsal fin rounded; pectoral, ventral and anal fins reddish; caudal and dorsal blackish; height of the dorsal equal to two thirds its length; third and fourth rays of the anal reach the base of the caudal. Length of the specimen from which the description is drawn 15 inches.

Rays, D. 13, P. 18, V. 9, A. 8, C. 18.—Storer.

HISTORY.—This I suppose to be the common Sucker on the east side of the Green Mountains in this state; but not having obtained any good specimen of it, I have copied above Dr. Storer's description, which was made from a specimen obtained from Walpole. They frequently weigh 3 or 4 pounds, and exceed 20 inches in length.

THE LONG-NOSED SUCKER.

Catostomus longirostrum.—LE SUEUR.

Journal Academy Nat. Sciences, Phil., I—102.

DESCRIPTION.—Body sub-cylindric, straight, delicate; head flat; eyes large, irides yellowish white; aperture of the mouth greatly arcuated, and large; scales very small and roundish; color of the body above reddish, paler on the sides; abdomen white, with a bluish tint; lateral line curved above the pectoral fin. Dorsal fin deeper than broad, quadrangular; the extremity of the anal fin does not reach the base of the caudal; head hori-

zontal, terminated in a long snout. Length of the individual described 5 inches.

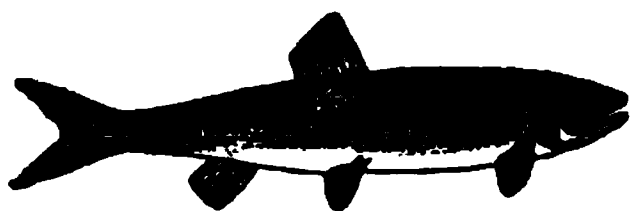
Rays, P. 16, V. 9, D. 12, A. 7, C. 18.—Le Sueur.

HISTORY.—"This fish I discovered," says Le Sueur, "in the state of Vermont; I have not seen it in any other state." Not having met with this fish, I can only give Le Sueur's account of it.

GENUS LEUCISCUS.—Klein.

Generic Characters.—The dorsal and anal fins short and without strong rays at the commencement of either; no cirri.

This genus embraces those fishes which are generally known in New England, by the names of Dace, Chub and Shiner.



THE COMMON DACE.

Leuciscus pulchellus.—STORER.

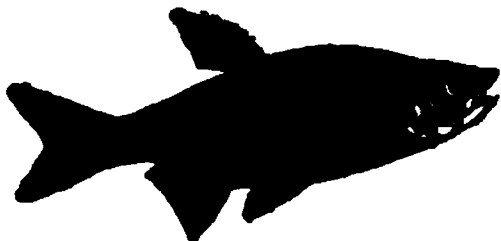
Storer's Report on Fishes of Massachusetts, p. 91.

DESCRIPTION.—Upper part of the head and tail blackish; back approaching to olive; sides lighter; belly white; cheeks, gill covers and lower fins more or less ruddy; scales striated, exhibiting a most beautiful play of green, blue, golden and silvery reflections. A dark colored membrane visible at the junction of the scales, giving the sides of the fish a reticulated appearance; 49 scales on the lateral line, which begins near the upper part of the gill-opening, bends rapidly downward through 9 scales, and then pursues a straight course to the tail. Head and operculum smooth, the latter with cupreous reflections. Scales rather large and much crowded above the pectoral fins. Eyes small, pupil black, surrounded by a golden line which fades into gray on the iris. Mouth large; lips, tongue and palate fleshy; jaws toothless; two patches of pectinated teeth in the throat, with four teeth in each. Ventral fins under the front of the dorsal; the anal fin twice its length from the caudal; the two first rays short and closely applied to the third in the dorsal and anal fin. Swimming bladder in two sacks connected by a tube. Length of the specimen before me 17 inches—from the snout to the posterior part of the operculum $3\frac{1}{2}$ —to the vent $9\frac{1}{2}$. Total length $4\frac{1}{2}$ times the greatest depth.

Rays, Br. 3, P. 16, V. 8, D. 10, A. 10, C. 19.

THE SHINER.

HISTORY.—This fish is quite common in lake Champlain and its tributaries. It is readily caught with the hook, and the flavor of its flesh is agreeable, but it is so soft and filled with small bones that it is not much valued as an article of food. The length of those usually taken varies from 5 to 12 inches, but they sometimes grow to the length of 20 inches.



THE SHINER.

Leuciscus crysoleucas.—MITCHELL.

Trans. Lit. and Phil. Soc. of N. Y., p. 459.

Fauna Boreali Amer. Fishes. page 122.

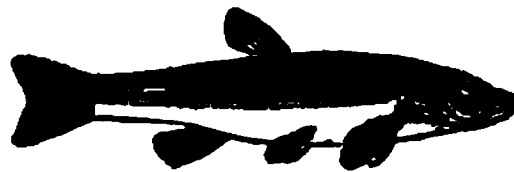
Storer's Report, Fishes of Mass., page 88.

DESCRIPTION.—Form ovate; body deep and thin, the depth contained 4 times in the total length. Color greenish above, lighter on the sides and yellowish white beneath; a very broad indistinct yellowish or cupreous stripe along the side to the middle of the tail. The fins of a dull yellow color, with the extremities of the dorsal, caudal and anal fins and the first ray of the pectoral more or less black; cheek and operculum with yellow and silvery reflections; scales rather large, radiated, crossed by concentric undulations, or striæ; the whole side exhibiting blue, green, cupreous, yellow and silvery reflections, according to the direction of the light. Eyes large; iris bright yellow. Head and gill covers smooth, mouth in front of the eyes, small, toothless, and directed upwards. The lateral line commences near the upper part of the gill opening, bends downwards and passes along nearly parallel to the curve of the abdomen, to the tail, being only one third as far from the belly as from the back at the ventral fin. Swimming bladder in two sacks. Length of the pectoral fins to their height as 2 to 7; ventrals before the dorsal with slender bracts above their base; dorsal fin medial, its length being to the height of the anterior part as 1 to 2; the anal fin commences under the termination of the dorsal, its length being to the height of the anterior part as 7 to 6; tail large and forked. Length of the specimen before me 4.6 inches; depth 1 1/2.

Rays, Br. 3, P. 17, V. 8, D. 10, A. 15, C. 19.

HISTORY.—This fish is quite common, particularly in the small ponds and coves along the shore of lake Champlain, and about the mouths of our large streams,

where it is found associated with perch, bull-pouts and mud fishes.



THE BROOK MINNOW.

Leuciscus atronotus.—MITCHELL.

Trans. Lit. and Phil. Soc. p. 460. Storer's Report on Fishes of Mass., p. 92.

DESCRIPTION.—Body rather thick and deep through the abdomen; head a little flattened above, and narrowed towards the snout. Color above brownish olive spotted with black; beneath white with cupreous and silvery reflections, and sometimes red; a dark band passes round the nose, crosses the eye, passes along the sides and through the middle of the tail, which is forked; above this band is usually a yellowish stripe; eyes middling size; iris bright yellow, where it is not darkened by the above mentioned dark band. The lateral line commences on the nape of the neck, passes obliquely downwards across the dark band on the side and along the lower margin of the band to the tail. Nostrils large, double and tubular. Dorsal fin behind the ventrals and twice as high as it is long. Vent medial and under the posterior rays of the dorsal fin. Fins brownish yellow. Swimming bladder in two sacks connected by a tube. Length 2 1/2 inches; head a little more than one sixth of the total length.

Rays, Br. 3, P. 12, V. 7, D. 7, A. 7, C. 19.

HISTORY.—This species is quite common in most of the streams in Vermont, and particularly so in those that fall directly into lake Champlain. It is an active, lively little fish, and on account of the stripes on its sides, the colors of which are changeable, according to the direction of the light falling upon them, it is one of our most beautiful fishes. When fully grown this fish is only from 2 1/2 to 3 inches long, and, though found in great numbers, its diminutive size renders it of no account as an article of food. It is chiefly sought to be used as bait for Pike and other large fishes.

The *Eroglosson nigrescens*, described by Rafinesque in the Journal of Academy Nat. Sci., Phil., I—422, which he says he found in lake Champlain, and several others of this family, which I know to exist in our waters, I have thought it best to omit, because I cannot speak of them with confidence without further examination.

THE MUD FISH.

THE COMMON PIKE.

GENUS HYDRARGYRA.—*Le Sueur*.

Generic Characters.—Ventral fins 6 rayed; teeth in the jaws and throat; those of the jaws conic and recurved; none in the palate; jaws protractile; lower jaw longer than the upper one; one dorsal fin, situated nearer the tail than the head, opposite to the anal fin; scales on the opercula and body; head flat, shielded above with large scales, the centre scale largest.



THE MUD FISH.

Hydrargyra fusca.

DESCRIPTION.—Color above dark olive, mottled with blackish; sides mottled or variegated with brown, green and golden, with faint indications of yellowish bars; belly dull brownish, bronzy yellow; fins dusky yellow; sides yellowish at the base of the tail, crossed by a vertical black bar, with a brownish, crescent-shaped line along the base of the caudal rays, making, with a vertical line, the form of the letter D. **Form** thick and plump; head slightly flattened above; upper jaw shorter than the lower, and broadly truncated; lower jaw curved upward and rounded; mouth slightly cleft; teeth in both jaws and front part of the vomer, small, crowded, and incurved; four patches of short, conical teeth in the throat. Eyes moderately large, pupil black, iris yellow, cornea very prominent and clear. **Scales** on the body, head, cheeks and operculum; those on the back part of the head largest. Tail fully rounded, a little shorter than the head, which is a little more than one-fifth the total length of the fish. Ventral fins small, medial, and slightly in advance of the beginning of the dorsal; anal fin under the posterior part of the dorsal and about as high as long; the dorsal nearly twice as long as high, and about its length from the caudal. The dorsal and anal have their first rays short and closely applied to the second ray; outer rays of the caudal also very short. Length of the longest of 12 specimens before me 4½ inches; greatest depth .8; thickness .5.

Rays, Br. 4, P. 15, V. 6, D. 14, A. 10, C. 16.

HISTORY.—These fishes exist in considerable numbers in the marshes and coves along the margin of lake Champlain, and of the rivers which fall into it. They are very tenacious of life, and live longer than most fishes without water. During droughts, as the waters subside

and recede from the coves, they have the power, by a springing motion, of transporting themselves from one little puddle to another. They also have the power of partially burying themselves and living in the mud and among the moist grass-roots, after the other small fishes associated with them are all dead for the want of water. In these situations vast numbers of them are devoured by birds, muskrats, and foxes. In severe droughts, like that of 1841, the quantity of small fishes which die in consequence of the drying up of the coves, is exceedingly great. In one small cove, which I visited on the 24th of September, 1841, I found *Mud Fishes* and other small fishes dead in piles, in the low places which had become dry. One small portion of the cove, still covered with water and leaves to the depth of 4 or 5 inches, was literally filled with fishes struggling together for existence. This portion amounted to about one square rod, and in this space there could not have been much less than a barrel of fishes. They consisted of pickerel, yellow perch, shiners, bull pouts and mud fishes, but mostly of the two last. My feelings were really pained at the sight, and moved by compassion for the poor fishes, I heartily wished for rain, which, on the next day, came in abundance, to the joy, not only of the fishes and their sympathizers, but of the whole country.

II.—ESOCES, OR PIKE FAMILY.

GENUS *Esox*.—*Linnaeus*.

Generic Characters.—Snout elongated, broad, depressed, and obtuse; sides of the lower jaw with long acute teeth; intermaxillaries, palate, vomer and tongue studded with small teeth; a single dorsal fin, situated far back and over the anal fin.



THE COMMON PIKE.

Esox estor.—*LE SUEUR*.

Journal Acad. Nat. Sci., Phil., 1-419.
Esox lucius, Rich. Fauna Boreali, p. 194.

DESCRIPTION.—Body thick, somewhat four-sided; back nearly straight from the head to the dorsal fin, and parallel to the abdomen. Color of the back blackish green; sides lighter, with violet and silvery reflections and several longitudinal rows of rounded and oblong yellowish spots; belly pearly white. Head one

THE PICKEREL.

fourth the total length, flattened or concave on the upper part, and of a dark bottle green color; large pores on the head and lower jaw; upper jaw broad, flattened and thinned down to an edge at the extremity; lower jaw reflected and longer than the upper; tongue truncated at the extremity; teeth on the tongue, vomer, palatine bones and jaws, of different sizes, and either straight or hooking inwards; eyes lateral, close to the crown, and mid-way between the gill opening and end of the snout; pupil surrounded by a golden line and grayish iris. Scales small, often emarginate, and towards the back marked with bright lines in the form of the letter V. Lateral line nearly straight, nearer the back than belly, and formed by a deep notch in every 3d or 4th scale; usually several irregular rows of these notched scales on the sides resembling lateral lines. Fins all marked with brownish and yellow, and usually more or less ruddy except the dorsal; pectoral and ventral fins small; the posterior attachment of the ventrals medial; vent under the front part of the dorsal, and anal fin under the posterior part; tail forked. Preoperculum irregular, narrow in the middle; operculum quadrangular, scaly on the upper part; suboperculum narrow, and a little longer than the operculum; interoperculum small and mostly concealed. Length of the specimen before me 17 inches—to the pectorals 4, ventrals 8, anal 11½.

Rays, Br. 15, P. 13, V. 10, D. 18, A. 16, C. 19.

HISTORY.—This species is very common in lake Champlain and all its larger tributaries. It is generally known in Vermont by the name of *Pickarel*. About the north end of the lake and in Canada generally it is called the *Pike*, on account of its resemblance to the English Pike. Indeed the resemblance is so close that Dr. Richardson regards them as identical, and has described our Pike in his *Fauna Boreali Americana* under the name of the foreign species, *Esox lucius*, but they are generally regarded by naturalists as distinct species. This fish grows to a large size, frequently exceeding 30 inches in length, and weighing 10 or 12 pounds. It is very voracious, and devours great numbers of reptiles and small fishes. It is taken both with the hook and seine, and is considered a very good fish for the table. The fishermen say that there is another fish of this family in lake Champlain, which they call the *Maskalongé*. If so, it is probably the fish which Richardson (*Fauna Boreali*, p. 127) calls *E. estor*, *Maskinongé*. I lately received one which

was sent me as a *Maskalongé*, but which proved to be only a plump specimen of the Common Pike.

THE PICKEREL.

Esox reticulatus.—LE SUEUR.

Journal Academy Nat. Sci., 1—414.
Storer's Report, Fishes of Mass., p. 97.

DESCRIPTION.—Color variable from greenish brown to brilliant golden, but in all cases marked with irregularly distributed longitudinal lines; beneath white. Snout obtuse; gape of the mouth great; lower jaw longer than the upper; teeth in front of the lower jaw small, on the sides large and pointed. Eyes moderate in size, pupil black, iris yellow; nostril double; fins greenish; the pectoral and anal reddish after death; dorsal fin longer than the anal; pectorals commence on a line with the 16th branchial ray; vent large, 2 lines in front of the anal fin; from the dorsal fin to the commencement of the caudal 2 inches. Length of the specimen from which the above description was made 16 inches; head about one fourth the length of the body; width of the head in front of the eyes equal to half its length.

Rays, B. 17, D. 18, P. 13, V. 11, A. 17, C. 19.—Storer.

HISTORY.—This is the Common Pickarel on the east side of the Green Mountains in Vermont, as the preceding species is on the west side. It is found in Connecticut river and most of its larger tributaries, and it has multiplied exceedingly in several ponds to which it has been transported by the inhabitants in the neighborhood. This is the Common Pickarel of Massachusetts and the other New England states.

III.—SILURIDÆ OR CAT-FISH FAMILY.

GENUS PIMELODUS.—Lacepede.

Generic Characters.—Body covered with a naked skin; no lateral armature; jaws and often palatine bones furnished with teeth, but there is no band of teeth on the vomer parallel to that on the upper jaw. The form of the head varies exceedingly, as well as the number of cirri. Two dorsal fins, the second adipose.

THE BULL POUT.

Pimelodus vulgaris.

Silurus catus, Mitch. Trans. Lit. Phi. Society of New York, page 433.

DESCRIPTION.—Body without scales, covered with a mucous skin, tapering and cylindrical; head large, broad, depressed, color above dark, approaching to black; sides dark olive, or fuliginous, the color rubbing off or becoming lighter after be-

THE HORNED POUT.

ing taken from the water; belly dirty white, often tinged with red; fins dark, often purplish; mouth broad; under jaw longest, and a broad band of small conical teeth in each; cirri 8, 4 in a row upon the under lip, the two outer ones nearly twice as large as the middle ones, one still larger at each angle of the mouth, and a small one at each nostril; the first dorsal ray and the first ray in each pectoral fin a strong spine, with the point free and sharp. A bony process projects backward over the base of the pectoral fin. Tail slightly rounded. Length of the specimen before me $12\frac{1}{2}$ inches, width of the head 2.3, depth of the body 1.8, thickness 1.6.

Rays, B. 7, P. $1\frac{1}{7}$, V. 8, D. $1\frac{1}{6}$ —0, A. 20, C. 17.

HISTORY.—This fish, which is quite plentiful in lake Champlain, is here generally known by the name of Bull Pout. Those taken from the lake are usually from 9 to 13 inches in length. For the table they require skinning like the Eel; but, though their flesh is tender and well flavored, there is so much waste in dressing, because of the great size of the head, that very little account is made of them as an article of food. This fish I suppose to be the species described by Dr. Mitchell under the name of *Siburus catus*, but whether it is the *Pimelodus catus* of Le Sueur, I have no means of judging, never having seen his description.

THE HORNED POUT.

Pimelodus nebulosus.—LE SUEUR?

Memoires du Mus. d'Hist. Nat., V—149. Storer's Report, page 102.

DESCRIPTION.—Color dark olive, or fuliginous, darkest on the head and back, yellowish or cupreous on the sides, approaching to ruddy white on the belly; fins mostly ruddy at the base and brownish towards the extremity; head flattened above; upper jaw rather longest; both jaws furnished with numerous small conical teeth; 8 cirri about the head, 2 short ones at the nostrils, 4 longer ones on the chin, and 2 much longer, being 1.1 inch, extend backward from the angles of the mouth, and terminate in a fine filament. Spine of the 1st dorsal articulated, and free at the point; spines of the pectorals also free at the point, and strongly serrated interiorly; adipose fin over the posterior part of the anal. Tail nearly even. Length of the specimen before me $4\frac{1}{2}$ inches, width of the head .8. Body much flattened vertically towards the tail.

Rays, B. 7, P. $1\frac{1}{7}$, V. 8, D. $1\frac{1}{5}$, A. 20, C. 17.

THE CAT FISH.

HISTORY.—This fish is common in Connecticut river, and in many of its larger tributaries. The specimen from which my description was drawn was taken in Connecticut river at Barnet. It is there called the Pout, or Horned Pout. Having had an opportunity to compare only this one small specimen from Connecticut river with the Bull Pout found in lake Champlain, I am not prepared to say with confidence that they do not both belong to the same species; but as this specimen differs from the lake fish in having its body more flattened towards the tail, in having its upper jaw longest instead of shortest, in having the cirri at the angles of the mouth proportionally longer and the adipose fin more distant from the tail, I have introduced them as distinct species.



THE CAT FISH.

Pimelodus * * * * *

DESCRIPTION.—Color dark smoky brown approaching to black above; cupreous or fuliginous on the sides; belly dull ruddy white; skin scaleless and smooth; fins dull smoky brown, more or less ruddy below. Head slopes gradually from the nape of the neck to the snout, which, as well as the head, is narrower and more pointed than the preceding species; the body also is more elongated; 8 cirri in the usual situations, all blackish excepting the two middle ones on the under lip which are flesh-colored, and not more than half as large as the two outer ones; those at the angle of the mouth very long, reaching beyond the pectorals half way to the ventral fins; those at the nostrils smallest. Mouth narrow, with the upper jaw overlapping the lower; teeth small, conical and numerous. Bony spine in the pectoral fin very strong, with about 20 sharp teeth on the posterior edge, and a strong bony process lying over the base of the fin; first dorsal mid-way between the pectorals and ventrals, twice as high as long, spine more slender than in the pectorals; height of the adipose fin 1 inch, situated over the posterior half of the anal, which is long and slightly rounded; tail rather deeply forked with spreading, pointed lobes; lateral line indistinct. Length of the specimen before me, which was caught in Winooski river,

THE SALMON.

18 inches; from the snout to the pectoral $2\frac{1}{2}$; to the first dorsal $4\frac{1}{2}$; width of the head 2.4, longest cirri 4.3.

Rays, B. 8, P. 17, V. 8, D. 16—0, A. 25, C. 18.

HISTORY.—When I prepared my list of fishes at the beginning of this chapter, I supposed our Cat Fish to be the *P. cænopus* of Richardson. Upon re-examination, since that list was printed, I find our fish does not agree with his description, and I am now satisfied that it does not belong to that species. It is probably one of the eight species described by Le Sueur in the *Memoires du Muséum d'Histoire Naturelle*, at Paris, but not having access to that work, I am unable to designate the species, or to say with certainty that it is embraced among those there described. This species is only occasionally taken in the vicinity of Burlington, but is regarded as very good fish for the table. In some parts of lake Champlain it is said to be quite plentiful.

IV.—SALMONIDÆ—SALMON FAMILY.

GENUS SALMO.

Generic Characters.—Head smooth; body covered with scales; two dorsal fins, the first supported by rays, the second fleshy, without rays; mouth large; sharp teeth on the jaws and tongue; branchial rays usually about ten; ventral fins opposite the centre of the first dorsal one.

THE SALMON.

Salmo salar.—LINNÆUS.

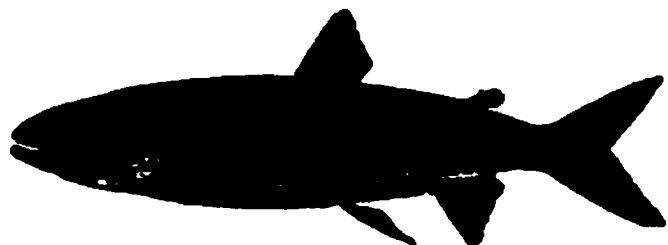
DESCRIPTION.—Color bluish silvery above, lighter on the sides and white beneath; black blotches upon the sides, much more numerous above the lateral line, for the most part surrounding the outline of the scales, leaving the color of the body unchanged; the spots upon the scaleless head are unbroken, and of a deeper color. Length of the head equal to one fifth the length of the fish; head sloping, darker colored above than the back of the specimen. Gill covers light silvery colored. Eyes small, pupil black, irides silvery; diameter of the eye equal to one fourth the distance between the eyes. Nostrils nearer the eyes than the extremity of the snout. Upper jaw longest, receiving into a notch at its middle the prominent tip of the lower jaw; both jaws, the palatine bones, vomer and tongue armed with sharp incurved teeth; lateral line nearly straight. The first dorsal fin commences on the anterior half of the body, height of its first rays equals its length; dark colored, with longitudinal rows of black blotches upon its base; length of the adipose fin equals one third its height; pectorals arise in front of the

THE NAMAYCUSH TROUT.

posterior angle of the gill covers; length equals one fourth their height; ventrals on a line opposite the middle of the dorsal, having on their sides a large axillary scale; anal fin white, higher than long; caudal dark brown, forked.

Rays, D. 12, P. 15, V. 9, A. 10, C. 19.
—Storer.

HISTORY.—The Salmon, formerly very plentiful in nearly all the large streams in this state, is now so exceedingly rare a visitant that I have not been able to obtain a specimen taken in our waters, from which to make a description for this work. They have entirely ceased to ascend our rivers, and only straggling individuals are now met with in lake Champlain. I have heard of only one being taken here during the past summer, and that I did not see. The causes which have been principally operative in driving these fishes from our waters have already been mentioned. When the country was new, according to Dr. Williams, there was a regular and abundant migration of these fishes to and from our waters, in spring and autumn.* They came up Connecticut river about the 25th of April, and proceeded to the highest branches. Shortly after they appeared in lake Champlain and the large streams which fall into it. So strong is their instinct for migration, that, in ascending the streams, they forced their passage over cataracts of several feet in height, and in opposition to the most rapid currents. They were sometimes seen to make six or seven attempts before they succeeded in ascending the falls. When thus going up in the spring they were plump and fat, and of an excellent flavor; and from the beginning of May to the middle of June they were taken in great numbers. When they arrived in the upper parts of the streams they deposited their spawn. Towards the end of September they returned to the ocean, but so emaciated and lean as to be of little account as an article of food. In the spring, salmon were often taken weighing from 30 to 40 pounds.



THE NAMAYCUSH, OR LONGE.

Salmo namaycush.—PENNANT

DESCRIPTION.—Form resembling the

* History of Vermont, vol. 1, page 147.

THE LONGE, OR SALMON TROUT.

Salmon; head flattened and slightly convex between the eyes; greatest depth contained about five times in the total length. Color dark bluish brown above approaching to black on the head; sides thickly spotted with roundish, yellowish gray spots on a dark brownish gray ground, the spots unequal, but usually about the size of a small pea; belly yellowish white; fins dark brown mottled with yellowish white; the pectorals, ventrals and anal slightly tinged with orange yellow. Lateral line plain, prominent and nearly straight. Scales small and thin, but much larger than on the Brook Trout. Eyes midway between the tip of the snout and the nape, and twice as near the former as to the hind edge of the gill cover, the measurement being made from the centre of the pupil; iris yellowish. Nostrils nearer the eye than the tip of the snout, double, orifices nearly equal, the anterior having a raised margin. Jaws equal, strong, and armed with incurved, sharp, conical teeth; similar teeth on the front part of the vomer, on the palate bones, and two rows on the tongue, with a deep groove between them. Preoperculum but little curved, and nearly vertical, suboperculum large and finely grooved. The dorsal fin medial, higher than long, and the ventral situated nearly under the middle of it; adipose fin club-shaped and nearly over the posterior ray of the anal; the anal higher than long, the anterior part being three times the height of the posterior; tail forked, with pointed lobes. Length of the specimen before me $23\frac{1}{2}$ inches—to the posterior edge of the operculum $5\frac{1}{4}$ —to the beginning of the dorsal $10\frac{1}{4}$ —to the vent $15\frac{1}{2}$ —weight 4 pounds.

Rays, B. 12, P. 15, D. 11, V. 9, A. 11, C. 19.

HISTORY.—This species of Trout bears considerable resemblance to the *Salmo trutta*, or Salmon Trout, of Europe, and being mistaken for that fish by the first European settlers of this country, it has since usually borne the name of *Salmon Trout*. In the northern parts of this state and in the eastern townships in Canada, it is at present extensively known by the name of *Longe*. In Pennant's Arctic Zoology, and by the fur traders at the northwest, its more common appellation is *Namaycush*, or *Namaycush Salmon*. It is called by Dr. Mitchell the Great Lake Trout, and he describes it under the scientific name of *Salmo amethystus*.* This magnificent trout equals or surpasses the Common Salmon in size, and is

THE BROOK TROUT.

found in most of the lakes and large ponds in the northern parts of North America. In the great lakes at the northwest it is often taken weighing from 30 to 60 pounds, and according to Dr. Mitchell, it has been taken at Michilimackinac of the enormous weight of 120 pounds. This fish was formerly common in lake Champlain and in several ponds in the western part of the state, but, like the Salmon, it is now rarely caught in those waters. It is, however, still found in considerable plenty in several ponds in the northern part of Vermont, particularly in Orleans county. Bell-water pond in Barton, and several ponds in Glover, Charleston, &c., are much celebrated on account of the fine Longe which they afford. These usually vary from half a pound to 10 pounds, but are often much larger. Individuals are said to have been taken recently in Glover weighing 25 pounds, and in Charleston exceeding 40 pounds.

This fish passes most of the time in the deepest parts of the lakes and ponds, but according to Dr. Richardson, resorts to the shallows to spawn in October. It is a very voracious fish, and is sometimes termed the tyrant of the lakes. It is taken with the hook and line, and is also speared by torch light. Its flesh is of a reddish yellow color, and is very much esteemed as an article of food. Roasting is said to be the best method of cooking it. "The Canadian voyageurs are fond of eating it raw, in a frozen state, after scorching it for a second or two over a quick fire, until the scales can be easily detached, but not continuing the application of heat long enough to thaw the interior."*

THE BROOK TROUT.

Salmo fontinalis.—MITCHELL.

DESCRIPTION.—Color above brown, with darker markings, fading into white or yellowish white on the belly; sides with numerous roundish yellow spots of unequal size, but usually about the bigness of a small pea; and also very small bright red spots commonly situated within the yellow ones. These red spots are extremely variable, being very few in some specimens and numerous in others. The caudal and first dorsal fin transversely banded or mottled with black. Head one seventh the total length, darker colored than the back. Eyes large, iris silvery. Teeth hook inward, on the jaws, tongue, palatine bones and vomer; those on the tongue largest. Jaws equal. Scales very

* Jour. of the Acad. Nat. Science, Philadelphia, Vol. 1, page 410.

* Richardson's Fauna Boreali Americana, vol. III, page 180.

THE BROOK TROUT.

minute. Lateral line straight. First dorsal fin on the anterior half of the body; adipose fin small, brownish yellow margined with black, and behind the anal; pectorals under the posterior part of the operculum; ventrals under the middle of the first dorsal; first ray of the anal, ventral and pectoral fins white; the second or third ray usually black, the rest of the fin reddish. Tail slightly forked.

Rays, Br. 11, P. 13, V. 8, A. 10, D. 10, C. 19.

HISTORY.—The Brook Trout is more generally diffused over the state than any other species of fish; there being scarcely a brook, or rill of clear water, descending from our hills and mountains in which it is not found. When the country was new they also abounded in the larger streams, where they often grew to the weight of two or three pounds. But they have been diminished by the causes already mentioned, and have been sought after with such eagerness as the most delicious article of food of the fish kind, that they are now seldom taken in our streams exceeding half a pound in weight, and much the greater number of them weigh less than a quarter of a pound. In many of the ponds they are still taken of a larger size, but their flavor is thought to be less delicious than that of those taken in running water, especially in ponds with muddy bottoms. The rapidity with which this and other species of fishes multiply under favorable circumstances was exemplified in an astonishing manner at an early day, in Tinnmouth, in this state. 'A stream which was about 20 feet wide, and which, like other streams, contained trout and suckers of the ordinary size and number, had a dam built across it for the purpose of supplying water for a saw mill. This dam formed a pond, which covered, by estimation, about 1000 acres, where the trees were thick and the soil had never been cultivated. In two or three years, the fish were multiplied in this pond to an incredible number. At the upper end, where the brook fell in, the fish were to be seen in the spring running over one another, so embarrassed by their own numbers as to be unable to escape from any attempt made to take them. They were taken by the hands at pleasure, and swine caught them without difficulty. With a small net the fishermen would take half a bushel at a draught, and repeat their labors with the same success. Carts were loaded with them in as short a time as people could gather them up when thrown upon the banks; and it was customary to sell them in the fishing season for a shilling a bushel. While

THE SMELT.

they thus increased in numbers they also became more than double their former size. This great increase of fishes is supposed to have been occasioned by the increased means of subsistence, in consequence of carrying the water over a large tract of rich and uncultivated land.'*

The trout is usually taken with the hook, and the bait universally used is the red earth worm, every where known by the name of *Anglo Worm*. Fishing for trout is a favorite and common amusement, and parties frequently go 15 or 20 miles for the sake of indulging in it.

GENUS *OSMERUS*.—*Artedi*.

Generic Characters.—Body elongated, covered with small scales; two dorsal fins, the first with rays, the second fleshy without rays; ventral fins under the front part of the first dorsal; teeth long on the jaws and tongue, two distinct rows on the palatine bones, but none on the vomer, except at the most anterior part; branchial rays eight.



THE SMELT.

Osmerus eperlanus.—*ARTEDI*.

Yarrell's British Fishes, II—75, fig.
Journal Acad. Nat. Sci., Phil., I—230.
Fauna Boreali Amer., Fishes, page 185.
Storer's Report, Mass. Fishes, page 103.

DESCRIPTION.—Semi-transparent, color silvery, greenish above and white beneath; top of the head and edges of the jaws blackish; under jaw longest, with a keel-shaped projection near its extremity; teeth on the tongue and palate, and two rows on each jaw, mostly large and hooking inwards; mouth large; nostrils very large and nearer to the snout than to the eye. Eye rather large, iris silvery; lateral line straight. Scales of moderate size, thin and transparent. Fins slender and transparent; the dorsal, caudal, and upper edges of the pectoral brownish; all the rest white and delicate; height of the first dorsal twice its length; ventrals under the first rays of the dorsal; tail forked, with spreading, pointed lobes. Length of the longest of two specimens before me 9 inches, greatest depth $1\frac{1}{2}$ inch.

Rays, B. 8, P. 11, V. 8, D. 11, A. 15, C. 17.

HISTORY.—The Smelt is one of those migratory species of fishes, which pass a part of the time in salt water and a part

* William's History of Vermont, vol. I, p. 149.

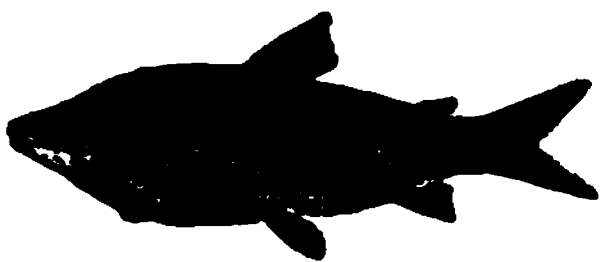
THE WHITE FISH.

THE HERRING FAMILY.

in fresh. Though not a constant visitant in our waters, he occasionally makes his appearance, and is sometimes taken in lake Champlain in very considerable numbers. The form of this fish is long and slender, and its bright silvery hue renders it very beautiful. It is sometimes taken with the hook, but more commonly with the net, and is very highly esteemed as an article of food. In Massachusetts, according to Dr. Storer's Report, 750,000 dozen of these fishes are taken annually in Watertown alone, and sent to Boston market.

GENUS *COREGONUS*.

Generic Characters.—Head small; mouth small and edentate, or furnished with very small teeth; scales large; length of the first dorsal fin less than the height of its anterior portion, second dorsal adipose and without rays; branchial rays seven or eight.



WHITE FISH, OR LAKE SHAD.

Coregonus albus.—LE SUEUR.

Journal Academy Nat. Sci., Phil., I—332.
Fauna Boreali Amer., Fishes, page 195, fig.
Boston Journal Natural History, III—477, pl. 28.

DESCRIPTION.—Form ovate, slightly tapering towards the tail; body deep and thick; head pointed, and with the mouth, very small; teeth in the jaws few, and so minute as scarcely to be perceptible to the sight or touch in the recent specimen; color silvery, bluish gray on the back, lighter on the sides, and pearly white on the belly, with a delicate iridescent play of colors throughout. Scales large, thin, pearly and very deciduous, arranged in about 20 longitudinal rows, giving the fish a slightly striped appearance; lateral line very nearly straight; fins small, brownish, often tinged with red; the dorsal mid-way between the snout and the extremity of the tail; the posterior rays of the dorsal and anal fins much shorter than the anterior, giving those fins a triangular appearance; adipose fin rather large; caudal forked and spreading; a long, slender bract above and partly behind the ventral fins. Length of the specimen before me, which is considerably larger than the average size and very fat, 22 inches, depth 6, thickness 2½, and weight 5½ pounds.

Rays, Br. 8, P. 15, V. 11, D. 14,—0, A. 14, C. 19.

HISTORY.—This fish, though the same as the celebrated White Fish of the western and northwestern lakes, is generally known in Vermont by the name of *Lake Shad*. Its Indian name at the northwest is *Attikawmeg*. This fish is quite common in lake Champlain, and, in some years, is taken in the months of May and June in considerable quantities with the seine. It is also found in many of the small lakes, in Lower Canada, connected with the St. Lawrence on the south side, notwithstanding the assertion of Dr. Richardson* that it does not exist in the St. Lawrence below the falls of Niagara. This is universally considered a most excellent fish, and nearly all are disposed to acquiesce in the opinion of Charlevoix, that, "whether fresh, or salted, nothing of the fish kind can excel it;" but few, I think, will agree with the Baron La-Hontan, who says that it should be eaten without any kind of seasoning, because "it has the singular property that all kinds of sauce spoil it." In warm weather this fish should be either cooked, or salted, soon after it is taken, as it quickly becomes soft and is spoiled. It is excellent either boiled or fried. The mode of boiling at the northwest, according to Dr. Richardson, is as follows: "After the fish is cleansed, and the scales scraped off, it is cut into several pieces, which are put into a thin copper kettle, with water enough to cover them, and placed over a slow fire. As soon as the water is on the point of boiling the kettle is taken off, shook by a semi-circular motion of the hand backwards and forwards, and replaced on the fire for a short time. If the shaking be not attended to exactly at the proper moment, or be unskillfully performed, the fish, coagulating too suddenly, becomes comparatively dry to the taste, and the soup is poor." The stomach of this fish is remarkably thick, and when cleansed and cooked is esteemed a great luxury. The White Fish is very thick and fleshy, and on account of the smallness of the head, fins and intestines, the waste in dressing is less than in any other fish. The greater part of those taken in lake Champlain are from 15 to 20 inches in length, and weigh from 1 to 3 pounds, though smaller ones are often taken, and occasionally larger ones, weighing from 3 to 6 pounds. They are usually sold fresh as taken from the water, and the price varies from 6 to 10 cents a pound. The White Fish seems to subsist principally upon small molluscous animals. I have sometimes found more

* Fauna Boreali Americana, vol. III, page 196.

THE COMMON SHAD.

than 100 univalve and bivalve shells in the stomach of a single fish.

V.-CLUPIDÆ OR HERRING FAMILY.

GENUS *ALOSA*.—Cuvier.

Generic Characters.—Body compressed; scales large, thin, and deciduous; head compressed; teeth minute, or wanting; a single dorsal fin; abdominal line forming a sharp keel-like edge, which in some species is serrated; upper jaw with a deep notch in the centre; gill rays 8.

THE COMMON SHAD.

Alosa vulgaris.—Cuv.

McMurtrie, Cuvier, ii, 235. Yarrell's British Fishes, ii, 136. Storer's Report, Fishes of Massachusetts, page 116.

DESCRIPTION.—Color of the top of the head and back bluish; upper portion of the sides, including the opercula, cupreous; beneath silvery; whole body covered with large, deciduous scales, with the exception of the head, which is naked; eyes large; pupils black; irides silvery; diameter of the eye equal to the distance between the eyes; nostril nearer the eye than the snout; upper jaw notched in the centre; its lateral edges slightly crenated; abdomen serrated; a black blotch at the posterior angle of the operculum; dorsal fin on the middle of the back, shuts into a groove; height equal to two-thirds its length; pectorals silvery; height to the length as 3 to 1; ventrals opposite the middle of the dorsal; anal received into a groove; caudal deeply forked. Length of the head to the whole length of the body as 1 to 6. Usual weight from 1 to 4 pounds.

Rays, D. 19, P. 16, V. 9, A. 20, C. 20.—Storer.

HISTORY.—This excellent and valuable fish, which is common both to Europe and America, was formerly taken in Connecticut river in large quantities, particularly in the neighborhood of Bellows Falls. It is still taken plentifully in Merrimack river, and in many other streams which flow into the Atlantic ocean from N. England. I cannot learn that it has ever been taken in lake Champlain, but on account of some resemblance in form and appearance between this species and the *Coregonus albus*, or White Fish, the name of Shad, or Lake Shad, is here very generally applied to the latter.

GENUS *HIODON*.—Le Sueur.

Generic Characters.—The form of a herring; abdomen trenchant, but not serrated; one dorsal fin opposite to the beginning of the anal; hooked teeth on the jaws, vomer and tongue; head small; eyes very large and situated near the end of the snout; branchial rays eight or nine.

THE WINTER SHAD.



THE WINTER SHAD.

Hiodon clodulus.—Le Sueur.

Hiodon clodulus et *H. tergisus*. Le Sueur, Jour. Ac. Nat. Sci. Phil. I—364, fig.

DESCRIPTION.—Body deep and thin: back elevated and nearly straight; belly trenchant; dorsal fin quadrangular; ventrals with large branching rays, and a long bract over their base; anal fin long, with the anterior portion large and pointed, and nearly straight, or rounded with a depression between it and the posterior portion. Color towards the back bluish, with metallic reflections, pearly and silvery below; head small, greenish brown above, with bronze reflections on the sides; dorsal and caudal fins brown, the others lighter. Eyes far forward, large, round; pupil black; iris with yellow and pearly reflections. Nostrils large, double, and very near the end of the snout; lateral line nearly straight, nearer the back than the belly; tail deeply forked; scales rather large, brilliant, about 60 on the lateral line. Mouth oblique; jaws even when shut, but on account of the obliquity of the gape the lower jaw appears longest when the mouth is open; numerous small conical teeth in both jaws, on the vomer, palatine bones, and tongue, the latter largest and hooking inward. Length $13\frac{1}{2}$ inches; depth $3\frac{1}{4}$; diam. of the eye .7.

Rays, B. 8, P. 12, V. 7, D. 11, A. 30, C. 18.

HISTORY.—Le Sueur's account of the genus *Hiodon* was published in 1818, in the Journal of the Academy of Natural Sciences. In this paper he describes what he considers two species, to which he gives the name of *H. tergisus* and *H. clodulus*, but at the same time intimates a possibility that they may both belong to the same species. The difference upon which he constituted the two species, was in the form of the anal fins, the *H. tergisus* having the anterior portion of that fin rounded, with a depression between that and the posterior portion, and *H. clodulus* with the anterior portion pointed, and the line to the posterior angle nearly straight. I have before me two specimens, which were caught at the same time. One is $13\frac{1}{2}$ inches long, and has the pointed and straight anal fin of Le Sueur's *H. clodulus*, and the other, 13 in. long, has the rounded, notched anal fin of his *H. tergisus*. In other respects scarcely any difference can

THE COMMON BILL FISH.

be discovered, and I have no doubt that they both belong to the same species. This fish is often called the White Fish by the fishermen. It is considered a very good fish for the table, but is not taken in lake Champlain very plentifully.

GENUS *LEPISOSTEUS*.—*Lacepede*.

Generic Characters.—Both jaws with rasp-like teeth, having a row of longer, pointed ones on the margin; branches united on the throat by a common membrane, which has three rays on each side; scales of a stony hardness; dorsal and anal fins opposite to each other, and far back.



THE COMMON BILL FISH.

Lepisosteus oxyurus.—*RAFINESQUE*.

Ichthy. Ohioensis, p 74. Kirtland's Report, p 196.
Boston Jour. Natural History, IV—16.

Lepisosteus huronensis, Fauna Boreali Americana, p 237.

DESCRIPTION.—Body long, cylindrical; back slightly arched in a regular curve; head flattened above and on the sides, encased in a bony covering, having distinct strim, grooves and sutures, with the jaws, which are thickly set with teeth of different sizes, lengthened out into a slender, flattened beak; upper jaw reaches beyond the lower, with nostrils near its extremity; tongue fleshy, bilobate; roe green; eyes just behind the angle of the mouth, and near the articulation of the lower jaw. Color above brownish leaden, sometimes with an umber hue, darkest on the head, yellowish pearly white below; sides spotted with blackish towards the tail; pectoral and ventral fins brownish; dorsal, caudal and anal yellow and ruddy, spotted with black; dorsal fin commences over the posterior part of the anal; the attachment of the caudal oblique, fin rounded, with the outer rays armed with sharp, spiny scales. Body covered with thick, strong, hard, bony scales, of rhomboidal form, and regularly arranged in oblique rows. Upon the lateral line, which is straight, but indistinct towards the tail, there are 60 scales. Length of the specimen before me 3 ft. 4 in.; upper jaw to the angle of the mouth 7 in.; from the angle to the orbit 1.2 in.; from the point of the bill to the middle of the gill opening 12, or just one third of the total length, measured through the middle of the caudal fin; ventrals midway between the point of the bill and extremity of the tail. Weight 6 pounds.

THE STRIPED BILL FISH.

Rays, P. 11, V. 6, D. 8, A. 9, C. 12.

HISTORY.—This singular fish was described by Samuel Champlain, as an inhabitant of the lake now bearing his name, more than 200 years ago. He called it *Chausarou*, which was probably the Indian name. The Indians assured him they were often seen eight or ten feet long, but the largest he saw was only five feet long, and about the thickness of a man's thigh. It is considered a very voracious fish, and when any of them are taken, or seen in the water, the fishermen calculate upon little success in taking other kinds. Charlevoix tells us that he preys not only upon other fishes, but upon birds also; and that he takes them by the following stratagem: Concealing himself among the reeds growing on the marshy borders of the lake, he thrusts his bill out of the water in an upright position. The bird, wanting rest, takes this for a broken limb, or dry reed, and perches upon it. The fish then opens his mouth and makes such a sudden spring that the bird seldom escapes him. Charlevoix also assures us that the Indians regarded the teeth of this fish as a sovereign remedy for the headache, and that pricking with it where the pain was sharpest took it away instantly. The scales with which this fish is covered are so thick and strong, as to form a coat of mail, which is not easily pierced with a spear. They are taken only occasionally in the seine at the present day, but are said to be sometimes seen in considerable numbers lying in the marshy coves. Its flesh is rank and tough, and is not used for food. The usual length of those now taken, is from two and a half to three feet, though they are often much longer. The specimen, from which the preceding figure and description were made, was taken at the mouth of Winooski river, May 11, 1841. One of the largest specimens which I have seen was taken at the same place, June 16, 1838, and is now in my possession. It is 46 inches long, and when caught weighed 9½ pounds. This species is found in the great western lakes, and in the Ohio river, where this and several other species are known by the name of *Gar Fishes*.



THE STRIPED BILL-FISH.

Lepisosteus lineatus.

DESCRIPTION.—Color above light olive, with a dark line along the middle of the back, and dark roundish spots on the up-

THE STRIPED BILL FISH.

THE LING.

per mandible and towards the tail. A broad dark bluish brown stripe commences on the side of the bill, passes backward through the eye, across the cheek and operculum, and along the side and through the middle of the tail to its extremity; below this, commencing on the lower jaw a little forward of the angle of the mouth, is a bright yellowish white stripe, which touches upon the lower side of the eye, passes through the base of the pectoral fin and vanishes near the tail; still lower is a grayish brown stripe, with a lighter one along the middle of the belly to the vent; fins yellowish, spotted with brown; under mandible black; eye close to the angle of the mouth, and directly behind it; pupil black, surrounded by a bright golden line; iris brown where covered by the brown stripe, but lighter on the upper and lower margin. Bill flatter and broader, proportionally, than in the *L. oxyurus*; teeth sharp, and of different sizes, 4 rows above and 2 below; upper jaw considerably longest, terminated in a knob on which the nostrils are situated, and which is articulated over the tip of the lower jaw; all the fins proportionally much longer and more slender than in the *L. oxyurus*, the dorsal and anal reaching the base of the caudal. Lateral line straight, passing along near the upper edge of the dark lateral stripe, containing 62 scales. Scales rhomboidal, arranged in oblique rows. Pectoral fins situated under the membranous prolongation of the gill cover; ventrals nearly medial; height of the dorsal 1 in., length .4, commences over the posterior part of the anal, and extends half its length beyond it; height of the anal fin 1 inch, length .5; the attachment of the tail oblique; tail contained about 6 times in the total length; the head, including the bill, a little more than 3 times. Length of the specimen before me 10.3 inches; lower jaw 2, upper 2.2, from the snout to the eye 2.3, to the posterior part of the gill cover 3.2, to the ventral fins 5, to the commencement of the anal 7, of the dorsal 7.3; longest rays of the caudal 1.7.

Rays, P. 12, V. 6, D. 8, A. 9, C. 12.

HISTORY.—The only specimen which I have seen of this fish was the one from which the preceding description and figure were drawn. It was taken in Burlington during the drought in August, 1841, in a small cove, whose communication with the Winooski river had been cut off by the subsiding of the water. This fish may be the young of the preceding species, but finding so many points of difference, I have thought it best to introduce a separate description.

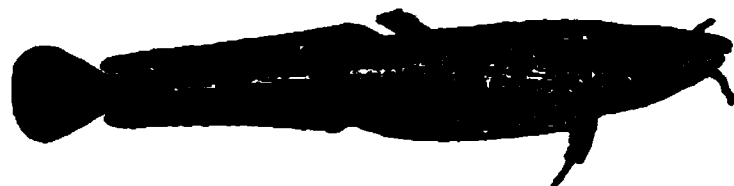
ORDER III.—*Malacopterygii*—*Subbrachii*.

Fishes of this order have their gills pectinated, or comb-like, and the ventral fins very near the pectoral, either before, beneath, or a very little behind.

I.—GADIDÆ, OR COD-FISH FAMILY.

GENUS *LOTA*.—Cuvier.

Generic Characters.—Body elongated, one anal and two dorsal fins; the second dorsal and the anal fin long; cirri more or less numerous.



THE LING OR METHY.

Lota maculosa.—LE SUEUR.

Rich. Fauna Horeali, p. 248. Kirtland's Report, 198.
Bust. Jour. Nat. Hist. 1V—24. *Gadus maculosus*,
Le Su. Jour. Acad. Nat. Sci., Phil., 1—83.

DESCRIPTION.—Body thick; back nearly straight from the snout to the tail; abdomen capacious, and often flabby when not distended with food or spawn; head broad and much depressed; upper jaw longest, with the upper lip extending considerably beyond the jaw; snout pointed; orbit elliptical; eyes rather small and nearly round, pupil bluish black, iris grayish golden. Above varied with brownish, olive and fuliginous, darkest on the head; sides obscurely spotted with whitish; belly yellowish, rusty-white, with ruddy tinges; lateral line commences above the gill opening and runs a straight course to the middle of the tail: nostrils double, the anterior lengthened into short cirri; the cirrus depending from the tip of the under lip reddish brown; all the fins brownish with their margins blackish; ventral fins before the pectoral, slender and pointed; pectorals broad and rounded; first dorsal short; second dorsal commences nearly over the vent, and extends to the base of the caudal; whole outline of the caudal rounded; anal fin commences about an inch behind the beginning of the second dorsal, and terminates a little anterior to the termination of the dorsal; teeth small and card-like on the jaws, palate and throat; tongue fleshy and smooth. Length of the largest of three specimens before me 23 inches, head, to the upper part of the gill opening, 4, first dorsal 1.5, second dorsal 9.5, anal 8.3, height of the dorsals and anal 1, of the jugular and pectorals 3, cirrus on the lip 1.3; orbit .4 by .5, distance between

THE EEL-POUT.

THE COMMON EEL.

the orbit 1.2; vent 1 inch nearer the snout than to the extremity of the tail.

Rays, B. 7, V. 6, P. 20, D. 10—74, A. 68, C. 40.

HISTORY.—This fish, which is quite common in lake Champlain and its tributaries, I have referred to Le Sueur's species the *Gadus maculosus*, as agreeing more nearly with his description than with any other to which I have access. There are, however, several differences between them. In Le Sueur's species the jaws are said to be equal; in ours, the upper jaw is uniformly longest;—in his the lateral line is said to be in the middle of the body; in ours, anterior to the vent, it is much nearer the back than the belly. Our fish bears considerable resemblance to the *Lota brasimiana* described by Dr. Storer in the Boston Journal of Natural History, vol. IV, page 58. But it differs from his description and figure in having the upper jaw longest, in having the snout more pointed and less orbicular, &c. Judging from the descriptions without specimens for comparison, I should say that our fish differs as much from either of the species referred to, as they differ from each other, and that they either constitute three distinct species, or are all varieties of the same species.

The Ling is held in very low estimation as an article of food, the flesh being tough and the flavor unpleasant. This fish is one of the greatest gormandizers found in our waters. If he can procure food, he will not desist from eating so long as there is room for another particle in his capacious abdomen. He is frequently taken with his abdomen so much distended with food as to give him the appearance of the globe or toad-fish. The smallest of the three before me, when my description was made, being 16 inches long, was so completely filled with the fishes swallowed, that their tails were plainly seen in its throat by looking into its mouth. On opening it, I found no less than 10 dace, *L. pulchellus*, all about the same size, and none of them less than 4 inches long. Seven of these were entire, and appeared as if just swallowed. Upon the others, the digestive process had commenced.

THE EEL-POUT.

Lota compressa.—LE SUEUR.

Jour. Acad. Nat. Sci., 1—84. Storer's Report, 134.

DESCRIPTION.—Color of the back and sides yellowish brown, variegated with darker brown spots; gill cover and snout darkest; abdomen whitish. Body in front of the first dorsal cylindrical, beginning

to be compressed at the sides, at the extremity of the pectorals, gradually becoming more so towards the tail, so that the caudal rays appear a membranous prolongation of the body; body covered with minute scales, looking like cup-shaped depressions; lateral line straight, conspicuous. Head much compressed; eyes circular; nostrils double; a minute cirrus rises from the back of each anterior nostril, and from the tip of the chin; upper jaw longest; jaws and palate armed with minute teeth. First dorsal lighter than the body, situated the length of the head back of head, short; second dorsal long, reaching to the tail; anal, the same length as the dorsal; caudal rounded; most of the fins margined with black. Length of the specimen 6 inches, head 1. Rays could not be counted on account of the fleshy texture of the fin-membrane. —Storer.

HISTORY.—This fish is found in Connecticut river and its tributaries. Not having obtained a specimen of it, I have copied Dr. Storer's description. It was first described by Le Sueur, from a specimen obtained at Northampton.

ORDER IV.—MALACOPTERYGII—APODES.

Fishes of this order have long bodies, a thick skin, and no ventral fins.

MURÆNIDÆ, OR EEL FAMILY.

GENUS MURÆNA.—Linnaeus.

Generic Characters.—Body cylindrical, elongated, covered with a thick and smooth skin; the scales very small, lubricated with copious mucous secretion; mouth with a row of teeth in each jaw, and a few on the anterior part of the vomer; pectoral fins close to a small branchial aperture; no ventral fins; dorsal fin, anal fin and caudal fin united.



THE COMMON EEL.

Murena vulgaris.

Murena anguilla, Lin. et. Pen. *Anguilla acutirostris*. Yarrell, Brit. Fishes, II—234. *A. vulgaris* Trans. Lit. and Phil. Soc. N. Y., 1—360.

DESCRIPTION.—Specimen 31 inches in length; from the tip of the snout to the base of the pectorals 3.6, to the vent 13.3, to the commencement of the anal 13.8; circumference just before the eyes 2.3, one and a half inch from the tip of the

THE BLACK EEL.

upper jaw 3.7, at the base of the pectorals 5, at the commencement of the dorsal 6.5, of the anal 5.7, distance between the eyes .6, height of the pectorals 1.4, base .6. Body cylindrical; color above dark olive brown, extending down low upon the sides; belly white, or yellowish white, sometimes with a ruddy tinge; lateral line irregular, indistinct, and above the middle of the body, before the vent, behind it, medial and straight to the middle of the tail; jaws narrow and rounded at the end; lower jaw longest, tipped with brown; lips fleshy; a broad band of small, short teeth in each jaw and upon the vomer; eye over the angle of the mouth, pupil black, iris golden; nostrils near the eyes; a short fleshy cirrus on each side of the snout; small mucous pores on various parts of the head; gap of the mouth small; gill opening small and under the anterior origin of the pectoral fin, which is pointed; dorsal, caudal and anal fin united. Pectoral rays 12. Vent 3 inches nearer the snout than to the extremity of the tail.

HISTORY.—This is the common Eel in Vermont, on the west side of the Green Mountains, and also in Canada, where it is taken in very large quantities. When skinned and skilfully cooked it is an agreeable and nourishing article of food, and is by many considered one of our best fishes; some, however, find it difficult to surmount the prejudice occasioned by its slender snake-like appearance. The ordinary weight of those taken in our streams is from 1 to 3 pounds. By comparing the above description with the two following, it will be seen that this Eel differs very materially from those found in other parts of New England, particularly in the relative position of the pectoral fins. By comparing our Eel with the description and figure of the Sharp-nosed Eel, *Anguilla acutirostris*, in Yarrell's British Fishes, vol. II, p. 284, I find the agreement in the position of the fins, &c., so perfect, that I have little doubt that they belong to the same species, and that the Common Eel of the St. Lawrence and its tributaries is identical with the Common Eel of Great Britain. Between our fish and Yarrell's figure there are some slight differences. In the figure the head is too broad, and the middle rays of the pectoral fins are too short. In our fish the middle rays are longest, making the fin appear pointed.

THE BLACK EEL.

Murana bostoniensis.—LE SUEUR.

Journal Acad. Nat. Science, Phil., 1-37. Storer's Report, page 157.

DESCRIPTION.—Specimen 23 inches in

THE SILVER EEL.

length: from the tip of the snout to the base of the pectorals 8 inches; circumference of the body back of the head, at the commencement of the pectorals, 3.4 inches; at the commencement of the dorsal fin 3.4; around the head 3.2, at the distance of 1.5 from the snout; in front of the eyes 1.7; from the tip of the lower jaw to the anal fin 10½ inches; width of the body over the pectorals 1.2, pupil black, iris golden; width between the eyes .4; lateral line indistinct. Color grayish brown above; yellowish white beneath, with a tinge of red about the tail.—Storer.

HISTORY.—The Common Eel, found in Connecticut river, and in the streams and ponds in this state on the east side of the Green Mountains, I suppose to belong to this species. Not having obtained specimens of this and the following species, I can only give Dr. Storer's description of them. In some of the ponds this Eel grows to a very large size. They are frequently taken at the outlet of Barnard pond weighing 8 or 10 pounds.

THE SILVER EEL.

Murana argentea.—LE SUEUR.

DESCRIPTION.—Specimen 23 inches in length; from the tip of the snout to the base of the pectorals 7½ inches; circumference of the body back of the head at the commencement of the pectorals 3½, around the head 1½ inch from the snout 3, in front of the eyes 1.4, at the origin of the dorsal 3½; from the tip of the lower jaw to the anal fin 9½; width of the body over the pectorals .7; width between the eyes .3. Lateral line exceedingly distinct, appearing to divide equally the darker colored back from the beautiful lighter silvery abdomen. For the extent of 6 inches in front of the anal orifice, a well marked line or furrow resembling in appearance the lateral line.—Storer.

HISTORY.—The fish known by the name of Silver Eel on the east side of the Green Mountains in this state, I suppose to belong to this species, but I have had no opportunity for deciding the point by the examination of specimens.

II. CARTILAGINOUS FISHES.

I. STURIONIDÆ, OR STURGEON FAMILY.

Fishes of this Family have free branchæ, wide gill openings, an operculum, but no rays in the gill membrane.

THE ROUND-NOSED STURGEON.

GENUS ACIPENSER.—*Linnaeus*.

Generic Characters.—Body elongated, which, with the head, is provided with rows of radiated bony prominences; snout pointed, conical; mouth placed on the under surface of the head, tubular, and without teeth



ROUND-NOSED STURGEON.

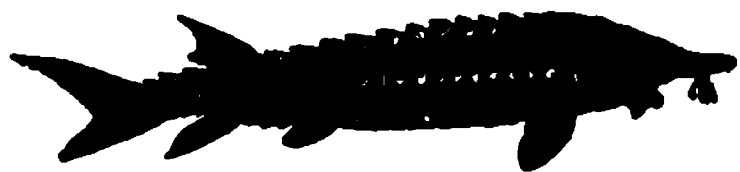
Acipenser rubicundus.—LE SUEUR.

DESCRIPTION.—General color bluish gray above, white with brushes of ruddy beneath; all the fins of a brownish hue, and slightly ruddy, with the outer margin whitish; form rounded, elongated and tapering regularly to the caudal; head rounded; snout short and rounded; upper part of the head with a bony covering; three rows of small and slightly developed bony tubercles without spines extending the whole length of the body, one on the back, and one on each side along the lateral line. Plates or tubercles on the lateral line 31 or 32; also a few plates between the dorsal and anal, and the caudal; but there are no ventral rows as there are in the *oxyrhynchus* and most other species. Eyes rather small, prominent, iris dark golden; nostrils double and large; four equal cirri suspended in a transverse line between the mouth and end of the snout, but nearest the latter, being 2 in. from the snout and $2\frac{1}{2}$ from the mouth; cirri $2\frac{1}{2}$ inches long, round, the size of a goose-quill at the base, and tapering to a point; color brownish white excepting their points, which are red; mouth under side of the head, tubular, ovate, 3 in. by 2 in., and capable of 2 inches protrusion. All the fins thick. The anal commences $4\frac{1}{2}$ in. behind the vent, and a little behind the middle of the dorsal. Color of the intestines dark; stomach a thick sack resembling a fowl's gizzard. Length of the specimen before me 4 ft. 2 inches; weight $26\frac{1}{2}$ lbs. Length of the head to the total length as 1 to 5; distance between the eyes 4 in., from the eyes to the end of the snout $4\frac{1}{2}$; from the nose to the commencement of the dorsal 37 inches.

HISTORY.—This fish is quite common in lake Champlain, and grows to a very large size. It is frequently taken in the seine measuring more than 6 ft. in length, and weighing 100 pounds or more. Its flesh, though not generally very much esteemed, if properly cooked is very good eating. When eaten fresh it is usually

THE SHARP-NOSED STURGEON

cut into slices and fried in butter, with suitable seasoning; but whether eaten fresh or salted, the skin should always be taken off before it is cooked, as the oil contained in that imparts a disagreeable flavor. The Indian method of capturing the Sturgeon in lake Champlain, according to Charlevoix (*Travels*, Vol. I—119), was as follows: 'Two men placed themselves in the two ends of a canoe. The one behind steered and the other stood up holding a dart in one hand, to which one end of a long cord was fastened, and the other end fastened to the canoe. When he saw a Sturgeon within his reach, he threw his dart and endeavored to strike where there were no scales. If the fish was wounded he darted off, drawing the canoe pretty swiftly after him, but usually died after swimming about 150 paces, and was then drawn in by the cord.'



THE SHARP-NOSED STURGEON.

Acipenser oxyrhynchus.—MITCHELL.

DESCRIPTION.—Body elongated, tapering; form pentagonal, with the angles covered with rough, radiated bony plates, each having a saddle-like base and a spur-like process arising from its centre and hooking backward, and usually terminating in a sharp point; the rest of the skin roughened by small scabrous patches of bony matter, resembling the spiculæ of minute crystals; head encased in a bony covering, and lengthened into an acute, conical snout; mouth on the under side of the head, ovate, toothless, and protractile; four cirri depending in a cross row between the mouth and the end of the snout, a little nearest the latter. The operculum is a single radiated bony plate; eyes rather small, the anterior part of the orbit just midway between the point of the snout and the posterior margin of the operculum; nostrils before the eyes, double, lower orifice much largest. Color grayish brown above, yellowish white beneath. *Bony plates* 12 between the encasement of the head and the dorsal fin, one of which rests upon the base of the dorsal, and is usually without a spine; between the dorsal and the caudal is usually one large plate and two or three smaller ones; lateral plates variable, but generally 28; ventral plates from 8 to 10; the spur-like processes longest and most pointed in the smaller specimens; usual length from 2 to 3 feet.

THE BLUE LAMPREY.

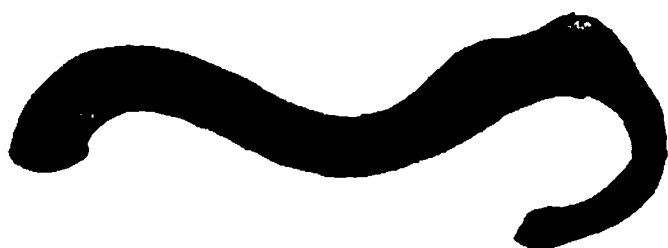
HISTORY.—This fish is occasionally taken in lake Champlain, and is here known by the name of *Rock Sturgeon*. It seldom exceeds 3 feet in length or 20 pounds in weight, but is much more generally and highly esteemed as an article of food than the preceding species, some even ranking it as one of our best fishes for the table. This, like the preceding, should be skinned before it is cooked, and for the same reasons.

II.—CYCLOSTOMIDÆ, OR LAMPREY FAMILY.

Fishes of this family have their jaws fixed in an immoveable ring. Their branchiæ are fixed with numerous openings.

GENUS PETROMYZON.—Linnaeus.

Generic Characters.—Body eel-shaped; mouth circular, armed with tooth-like processes; lips forming a continuous circle around the mouth; seven openings on each side of the neck, leading to seven branchial cells; no pectoral or ventral fins; dorsal, anal and caudal fins formed by an extension of the skin on those parts.



THE BLUE LAMPREY.

Petromyzon nigricans.—LE SUEUR.

Trans. Am. Phil. Soc. N. S. 1. 385. Storer's Rep. 197.

DESCRIPTION.—Color above dark bluish gray, beneath and fins dingy white; several rows of blackish dots about the head and neck. Anterior third of the body cylindrical; the posterior two-thirds flattened laterally, and very much so toward the tail; head slightly flattened above and terminated in an oblique, oval or circular mouth, which is armed within with numerous yellowish, spinous teeth, projecting from widened bases, and surrounded by a fleshy lip which is margined with a row of fine papillæ; a small white spot on the top of the head between the eyes, in front of which is a spiracle. The first dorsal commences in the middle of the fish, the separation between the dorsals merely a notch; the length of the first dorsal contained $4\frac{1}{2}$ times in the second. Length of the specimen before me 5 inches,—head, to the eye, 1 inch, to the vent $3\frac{1}{2}$, width of the mouth .4.

HISTORY.—The fresh water *Lampreys*, or *Lamprey-Eels*, as they are more commonly called, resemble, in their habits, the Blood-Sucker much more than the

ordinary fishes. They obtain their subsistence principally by attaching themselves by their mouths to the bodies of larger fishes, and drawing nourishment from them by suction; for this purpose their mouth and tongue are admirably adapted, the latter acting in the throat like the piston of a pump, while the circular lips of the former adhere closely to the side of the fish, and by these means the softer parts of the larger fish are drawn into the mouth and swallowed by the parasite. When a Lamprey once fastens himself, in this manner, upon a large fish, he adheres with such force as to baffle all the efforts of the fish to rid himself of his unwelcome incumbrance. Fishes are frequently taken in the seine with Lampreys still adhering to them, and others with deep depressed wounds upon their sides, affording indubitable proof of their having been attached. The fresh water Lampreys seldom exceed 6 or 8 inches in length, and no account is made of them as an article of food.

GENUS AMMOCETES.—Dumer.

Generic Characters.—Form of the body, the branchial apertures and fins, like those of the Lampreys; upper lip semi-circular, with a straight, transverse under lip; mouth without teeth, but furnished with numerous short membranous cirri.

THE MUD LAMPREY.

Ammocetes concolor.—KIRTLAND.

Boston Journal Nat. History, vol. III. p. 473, pl. 28.

DESCRIPTION.—Form nearly cylindrical for two-thirds the length, then gradually flattened to the extremity of the tail, where it is quite thin; color yellowish brown above, gradually becoming lighter towards the belly, but without the dividing line between the lighter and darker parts, mentioned by Le Sueur in his description of the *A. bicolor*. Eyes so minute as hardly to be seen by the naked eye; nostrils on a light colored disk on the upper part of the head in front of the eyes; upper lip longer than the lower, in the form of a horse-shoe, protractile and capable of being closed so as to conceal the lower one; small papillæ on the inside of the lips and fringes within the mouth. The branchial openings, seven in number, commence below and a little back of the eye, and extend backward, passing obliquely downward, the apertures appearing like short oblique slits. Sides with an annular, or ribbed appearance. The fin, which is of a dull yellowish color, commences near the middle of the back, passes round the tail and terminates just behind the vent. About three

fourths of an inch from the commencement is a considerable depression in the fin for more than half an inch, but it does not amount to a division. The fin rays are white, minute and forked. The longest of three specimens before me 5.3 inches; from the snout to the posterior branchial opening 1.1, to the vent 4.1. Rays too small to be counted.

HISTORY.—This fish agrees very well with Kirtland's description excepting the

depression in the dorsal, and that the broadest part of the dorsal is some distance behind the vent. During the drought in September, 1841, I found large numbers of these fishes, which had buried themselves in the mud at the bottom of the small coves along the banks of Winoski river, from which the water had evaporated. This fish is known in many places by the name of Mud-Eel, or Blind-Eel.

CHAPTER VI.

INVERTEBRAL ANIMALS OF VERMONT.

Preliminary Observations.

Invertebral animals are such animals as are destitute of a spine or back bone, and are so exceedingly numerous that, with the exception of the molluscous animals, we shall not even attempt to give a catalogue of them. The animals of this great division are extremely various in their structure, habits, and dispositions. Some have their bodies protected by a shelly covering, while others have their bodies and limbs surrounded by crustaceous plates, while, again, others have no other covering than a soft and tender skin. A few only of them have red blood, and none of them possess all of the five senses. In many cases the sexes are united in the same individual, and in some cases the species is continued by a process somewhat resembling vegetation. They all afford eminent manifestations of the wisdom and skill of the Creator; and, though generally regarded as insignificant and contemptible, many of them contribute largely to the comfort and interest of man, while a still greater number are employed in annoying and injuring him.

SECTION I.—MOLLUSCA.

Fresh-Water and Land Shells.

Prepared expressly for this work,

By CHARLES B. ADAMS, A. M.,

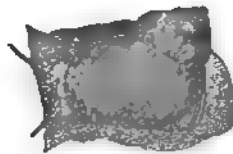
Professor of Natural History, Middlebury College.

FAMILY PERISTOMIANA.

GENUS PALUDINA.

Generic Characters.—Shell conoid; whorls convex, modifying the aperture, which is ovate or

nearly orbicular, with the margins united. Operculum thin, corneous, concentric. Animal with the head short; rostrum small and truncate; tentacles slender, with the eyes on an enlargement at their base; foot broad, thin.



Paludina decussata.—Say.

DESCRIPTION.—Shell ovate-conoid, with revolving rows of bristly filaments when young, smooth when mature, green; apex truncate; whorls six, convex; suture deep; spire a little longer than the aperture, which is pyriform; umbilicus very small. Length 1.26 inch; breadth 0.75 inch; divergence of the spire 58°.

REMARKS.—This species is very common in ponds and streams, and is found near the water's edge partly buried in mud or sand. Sometimes they are found crawling at the distance of a few feet from the water. They are viviparous, and produce their young in May. These, at birth, are furnished with a shell about an eighth of an inch in diameter, globular, and of a pale horn color, and are nearly transparent. In the progress of growth, the shell becomes proportionally more elongate, and the part which was formed previous to birth is invariably broken off. They are very rarely found heterostrophous. One such individual, of the size of a pea,

FRESH WATER AND LAND SHELLS.

was found in Otter Creek, in Middlebury.

Paludina integra.—SAY.

DESCRIPTION.—This species so much resembles the preceding, that a formal description is unnecessary. Its apex is not truncated, so that, with a greater divergence of the spire, it is, nevertheless, longer than that shell. It is also thicker, and the whorls are less convex. This shell is common in the western states, but it is extremely rare in Vermont, only three or four specimens having been obtained in lake Champlain. Length 1.3 inch; breadth 0.75 inch; divergence of the spire, 63°.

Paludina porata.—SAY.

DESCRIPTION.—Shell conic, horn color; whorls four and a half, convex; suture rather deep; apex subacute, spire as long as the aperture, the labium of which is appressed to the penultimate whorl; umbilicus rather large. Length 0.27 in.; breadth 0.19 inch; divergence of the spire 72°.

REMARKS.—This species is found plentifully in streams and in lake Champlain. It is sometimes brownish or greenish.

Paludina lustrica.—SAY.

DESCRIPTION.—Shell ovate-elongate, horn color; whorls four and a half, convex; suture rather deep; apex very obtuse; spire as long as the aperture, which is ovate-orbicular, with the labium not appressed to the penultimate whorl, and sometimes scarcely touching it; umbilicus small. Length 0.16 inch; breadth 0.11 inch; divergence of the spire 47°.

REMARKS.—This small species is common in lake Champlain. It differs from the preceding in the obtuseness of the apex, less divergence of the spire, and small umbilicus; also in the labium, which is quite distinct from the penultimate whorl, so that the shell much resembles a valvata.

GENUS VALVATA.

Generic Characters.—Shell discoid or conoid; whorls cylindrical; aperture orbicular, not modified by the penultimate whorl; margins continuous, distinct from the penultimate whorl. Operculum orbicular, concentric. Animal with the foot bilobed before; head probosciform; tentacles very long, slender, obtuse, cylindrical; eyes sessile behind the tentacles, with a branchial filament resembling a third tentacle.

*Valvata tricarinata*.—SAY.

DESCRIPTION.—Shell depressed, conic, thin, green, obsoletely striate; suture

well impressed; whorls three or four, rendered subquadrangular by the revolving carinae, of which two appear on the spire, and three on the last whorl; these are very much raised, rounded, equi-distant, the inferior bordering the umbilicus, which is broad and deep.—Length 0.13 inch; breadth 0.22 inch; divergence of the spire 90°, sometimes much greater.

REMARKS.—This shell, very curious on account of its carinae, is common in lake Champlain, and in some of our streams. Varieties occur in which the middle carina is obsolete, or in which none are very distinct.* Other varieties have the spire less elevated, or even in the plane of the last whorl.

Valvata sincera.—SAY.

DESCRIPTION.—Shell globose-discoid, obsoletely striate, brownish-green; whorls three and a half, accurately rounded, rapidly enlarging to the aperture; suture deeply impressed; spire but little elevated; apex obtuse; umbilicus deep, about two-thirds as wide as the last whorl; margin of the aperture touching the penultimate whorl. Length 0.1; breadth 0.2 inch; divergence of the spire about 135°.

REMARKS.—This shell is much like the *var. simplex* of the preceding species. The umbilicus is usually a little larger, but the most striking characteristic is the rapid enlargement of the whorls, the last being more than three times the diameter of the penultimate. The divergence of the spire is never so small as in that species, but like that is sometimes much more than in the type of the species, even to 180°.

FAMILY MELANIANA.

GENUS MELANIA.

Generic Characters.—Shell turritid; aperture entire, ovate, effuse; columella thickened, arcuate. Operculum horny, subspiral. Animal oviparous; foot short; rostrum truncate; tentacles filiform, with the eyes outside, at or near their base.

*Melania depygis*.—SAY. Var.

DESCRIPTION.—Shell elongate-conic, yellowish horn-color, with a broad rufous band on the whorls of the spire, with a second similar band on the lower third of the last whorl; upper whorls carinate on the lower side; whorls eight or nine; spire twice as long as the aperture. Length 0.53 inch; breadth 0.22 inch; divergence of the spire 33°.

* *Var. simplex*.—GOULD.

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REMARKS.—This species is interesting, as the only representative in New England of a family whose species are so numerous in the Southern and Western states. Here it is found only on our western border in lake Champlain, where but a few specimens have been obtained. It has some claims to be regarded as a new species, differing much in its proportions from the type of Say's species. But since specimens from Ohio vary much in their proportions, we have not been satisfied that it is a distinct species.

FAMILY LIMNÆANA.

GENUS LIMNÆA.

Generic Characters. *Shell* thin, oval or elongate; spire elevated, more or less acute; aperture longer than wide; margins not continuous; columella with a single oblique fold. *No operculum.* *Animal* hermaphrodite, spiral; head depressed; tentacles flattened, triangular, short, with the eyes at their base, on the inner front side; foot thin, oval, shorter than the shell.

*Limnæa megasoma.*—SAY.

DESCRIPTION.—Shell large, ovate, brown, with coarse incremental striae; whorls five, convex; last whorl very large, inflated; * suture deep; spire two-thirds as long as the aperture, which is large. Length 2 inches; breadth 1.2 inch; divergence of the spire 58°.

REMARKS.—This large and noble species was originally discovered in the North West Territory, in latitude 48°. Subsequently it has been found only in Burlington. It is very rare in cabinets, but quite recently the author of this work discovered a large number in Burlington, at a low stage of the water.

Limnæa appressa.—SAY.

DESCRIPTION.—Shell large, thin, horn color, elongate; whorls seven; upper ones planulate, lower ones convex, last one much enlarged and obtusely shouldered above; suture not much impressed; spire long, slender; apex acute; aperture long-oval; margin thin and sharp; columellar fold strong. Length 1.75 inch; breadth 0.75 inch; divergence of the spire above 33°, below 40°.

REMARKS.—This species has been found for the most part with the preceding at Burlington. Its claims to be regarded as distinct from the *L. stagnalis*, of Europe, are very slight.

* Whorls inadvertently made to revolve the wrong way in our figure.

Limnæa gracilis.—JAY.

DESCRIPTION.—Shell very long and slender, pale horn color; whorls four and a half, very oblique, slightly and regularly convex; suture not much impressed; aperture more than half as long as the spire, long-oval; labium entirely separate from the penultimate whorl, moderately reflected, with a large rima behind it, as strong as the labrum. Length 1 inch; breadth 0.18 inch; divergence of spire 18°.

REMARKS.—This extremely rare species was discovered by Prof. Benedict, in Lake Champlain, at Crown Point. One or two specimens have been found on the Vermont side of the lake. The shell is remarkable for its length, which is nearly six times the breadth, although the whorls are very few. The development of the labium is also very remarkable. No other species can be compared with this.

Limnæa pallida.—ADAMS.

DESCRIPTION.—Shell moderately elongate, ovate-fusiform, very pale horn color, semi-transparent, not very thin, with fine irregular striae of growth, whorls five and a half, moderately convex; suture well impressed; spire four-fifths as long as the aperture, acutely conic; apex sub-acute; body whorl not much enlarged, somewhat produced below; columellar fold moderate; umbilicus large. Length 0.48 inch; breadth 0.22 inch; divergence of the spire 45°.

REMARKS.—This species is rather common in lake Champlain, clinging to rocks and stones. It has not yet been found in any other region except in Andover, Ms. It is sometimes nearly white. It differs from *L. desidiosa* in having its columella much less tortuous, and its aperture less elongated below the fold.

Limnæa elodes.—SAY.

DESCRIPTION.—Shell brown horn-color; whorls seven, convex; suture well impressed; spire longer than the aperture, conic, sub-acute; last whorl somewhat ventricose; labium appressed closely to the penultimate whorl; columella prominent, with a very strong fold. Length 1.2 inch; breadth 0.55 inch; divergence of the spire 45°.

REMARKS.—*Limnæa umbrosa*, SAY, is probably only a variety of this species, its principal difference consisting in the feebleness of its columellar fold, which is, in this species, of a variable character. This variety is much more abundant in Vermont than the type of *L. elodes*. This species differs from *L. desidiosa* chiefly in not having the columella produced in a straight line below the fold; from *L. pallida* in the less proportional size of the

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last whorl, and greater convexity of the whorls; from *L. palustris* of Europe chiefly in the greater convexity of the whorls and less acumination of the spire. By some it is regarded as a variety of the latter.

Limnaea desidiosa.—SAY.

DESCRIPTION.—Shell brown horn color, elongate-ovate; whorls nearly six, slightly convex; suture distinct; spire about as long as the aperture, which is lengthened below; columellar fold feeble; labium appressed; columella produced below the fold in a straight line. Length 0.55 inch; breadth 0.25 inch; divergence of the spire 45° to 55° .

REMARKS.—This species is very common, and is subject to great variation of form, frequently being elongated, and resembling *L. elodes*. Other individuals are short, as in Say's figure (Am. Conch.,) and the upper part of the last whorl is inflated and more or less shouldered, while the lower part is produced as is usual. This variety approaches *L. umbilicata* of Mass., which has the umbilicus larger, and the lower part of the last whorl abbreviated, inflated, and globular.

Limnaea caperata.—SAY.

DESCRIPTION.—Shell ovate, brown, with minute revolving raised lines, which are in some very distinct, and in others mostly obsolete; whorls nearly six, convex; suture distinct; spire about as long as the aperture, conic, acute; columella reddish, slightly folded, thickened, and reflected over an umbilicus. Length 0.45 inch; breadth 0.24 inch; divergence of the spire 57° .

REMARKS.—This species is well characterized by the revolving raised lines, which will generally be seen around the umbilical region, when obsolete elsewhere. The last whorl and the aperture are more regularly rounded than in the preceding species.

GENUS *PHYSA*.

Generic Characters.—Shell heterostrophe, shining, otherwise like *Limnaea*; operculum wanting; animal with long, slender tentacles; having the eyes at their base on the inner side.

Physa ancillaria.—SAY.

DESCRIPTION.—Shell ovate, yellowish brown, sometimes of a bay color; whorls four, flattened; suture not impressed; spire less than one-fifth of the length of the aperture; apex acute; last whorl very large; aperture acute and narrow above, wide below; outer lip often thickened within; columella produced in a right line below its fold. Length 0.65 inch; breadth 0.48 inch; divergence of the spire 110° .

REMARKS.—This species, seldom found plentifully, is not uncommon in lake Champlain. It is there found of a deep bay color.

*Physa heterostropha*.—SAY.

DESCRIPTION.—Shell ovate, brown; whorls five, slightly convex; suture slightly impressed; apex acute; aperture acute and somewhat narrowed above; columella produced in a right line; outer lip often thickened within. Length 0.75 inch; breadth 0.45 inch; divergence of the spire varying in different shells from 65° to 70° .

REMARKS.—This species is abundant in various parts of this state. Its young are not easily distinguished from those of the preceding species.

Physa gyrina.—SAY.

DESCRIPTION.—Shell long-ovate, yellowish brown; whorls five, slightly convex; suture moderately impressed; apex acute; aperture less acute above than the preceding species; columella a little curved below; outer lip often thickened within. Length 0.55 inch; breadth 0.75 inch; divergence of the spire 50° .

REMARK.—This species is very rare in this state.

Physa hypnorum.—DRAP.

DESCRIPTION.—Shell elongate, yellowish brown; whorls six, moderately convex; suture well impressed; apex acute; spire nearly as long as the aperture, which is regularly narrowed to the tip; columella oblique, in its lower part turned backwards and upwards; outer lip not thickened within. Length 0.58 inch; breadth 0.25 inch; divergence of the spire 45° .

REMARKS.—This species, described by Say as *P. elongata*, does not differ from the European shell, whose name we have prefixed to it. It is found in swamps and in small sluggish streams.

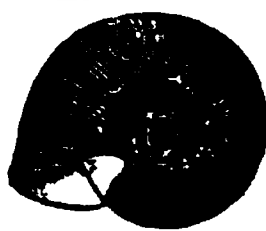
The above four species of *Physa* differ chiefly in the ratio of the spire to the aperture, and in the divergence of the former, which depends on the ratio of the length and breadth so far as it is uniform in different parts of the spire. The gradation in these characters is parallel, as may be seen by a comparison of their measurements.

GENUS *PLANORBIS*.

Generic Characters.—Shell with the revo-

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tutions of the spire in a plane, and subsequently visible on both sides; aperture lunate by the intrusion of the penult whorl; operculum none; animal long, rolled up like the shell; head saddle-shaped; tentacles long, contractile, with the eyes at their inner base.



Planorbis lentus, *P. corpulentus*, and *P. trivolvis*, of SAY, are undoubtedly varieties of one species, to all of which the following description will apply.

DESCRIPTION.—Shell brown, sometimes greenish, coarsely striate across the whorls, of which there are four and a half; inner whorls sharply carinate on the left side; suture very deep, except between the inner whorls of the left side, where it is not depressed below the carina; inclination of the shell to the left from a perpendicular 15° to 20° ; aperture extending beyond the plane of the left side, sometimes beyond that of the right side, narrowing from the right to the left, with about three quarters of the height of the penult whorl moderately intruding. Greatest breadth 1.1 inch; least breadth 0.36 inch; height of aperture 0.58 inch.

REMARKS.—Sometimes the carination of the left side extends through all the whorls. The extension of the aperture on the right side is of a very variable character, especially at different ages, and in some localities the growth is very exuberant. A remarkable example of the latter case occurred in Otter Creek, just below the falls in Middlebury, where great numbers of large and beautiful specimens were obtained in the spring of 1839, although they have since entirely disappeared.

Planorbis campanulatus.—SAY.

DESCRIPTION.—Shell brownish or greenish yellow, finely striate; whorls four and a half, narrow, sub-carinate on the left side; inner whorls on this side scarcely depressed below its plane, exhibiting the apex distinctly; cavity of the right side very profound; inclination from a perpendicular to the left about 20° ; aperture abruptly campanulate, oblique, including the lower two-thirds of the height of the penult whorl. Greatest breadth 0.59 inch; least breadth 0.45 inch; height 0.27 inch.

REMARKS.—This species resembles some small varieties of the preceding; but is distinguished by the abruptly campanulate aperture, and the narrowness of the outer whorl, which in this species is scarcely wider than the penult whorl,

while in that species, owing to the rapid enlargement of the whorls from the centre, the last greatly exceeds all the others.

Planorbis bicarinatus.—SAY.

DESCRIPTION.—Shell brown, or greenish horn color; irregularly striate across, with very slight revolving striæ; whorls three, carinate on both sides, but more acutely on the left side; suture generally coincident with the carinae except in the last semi-revolution on the right side; concavities of both sides equally deep, that of the right wider; inclination to the left about 20° ; aperture large, angulated by the left carina, embracing four-fifths of the length of the penult whorl. Greatest breadth 0.62 inch; least breadth 0.44 in.; height of aperture 0.31 inch.

REMARKS.—This species inhabits both quiet and running waters in ponds and streams of every size. It is very common.

Planorbis armigerus.—SAY.

DESCRIPTION.—Shell brownish horn color, feebly striate, shining; whorls four, subcarinate on the left side; right side slightly concave, left side deeply umbilicated; suture distinct and well impressed on both sides; inclination to the left about 40° ; aperture nearly orbicular, slightly intruded upon by one-fourth of the height of the penult whorl, very far within armed with six teeth, of which two are on the inner side, one on the middle, elevated, lamellar, oblique, tortuous, large, the other just below it very small, nearly conical; four on the outer side, of which the two left are large, elevated, lamellar, oblique, converging outwardly, the two on the right small, subconic, but little elevated. Greatest breadth 0.34 inch; least breadth 0.29 inch; height of aperture 0.13 inch.

REMARKS.—This species is remarkable and singular in the genus for its teeth, which have been elevated by Haldeman to a generic character. It is common among dead leaves in still water. In swamps which are dried in the summer, it then takes refuge in the moist earth and leaves.

Planorbis exacutus.—SAY.

DESCRIPTION.—Shell extremely thin and fragile, brown, sometimes encrusted with a blackish substance, meniscoid; whorls four, carinate on the left side; inner whorl on the right side slightly depressed; left side deeply umbilicated; last whorl much broader than all the others, convexly compressed on both sides to an extremely acute, medial carina; inclination to the left about 60° ; aperture large, cordiform. Greatest breadth 0.24 inch; least breadth 0.18 inch; height 0.055 inch.

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REMARKS.—This species is more compressed than any other native *Planorbis*, the breadth being usually almost four times the height; the regular double convex form is also remarkable; also its tenuity, a full grown specimen weighing only .05 of a grain.

Planorbis parvus.—SAY.

DESCRIPTION.—Shell brownish horn color, feebly striate, shining; whorls three and a half or four, moderately increasing; both sides concave, but the left more than the right; last whorl subcarinate in the middle; inclination to the left about 40°; aperture subelliptical, slightly modified by the intrusion of two thirds of the height of the penult whorl; greatest breadth 0.25 inch; least breadth 0.2 inch; height 0.07 inch.

REMARKS.—This species is found plentifully in a great variety of stations.

Planorbis deflectus.—SAY.

DESCRIPTION.—Shell horn color; finely striate; whorls four; last whorl well rounded, indistinctly carinate below; right side convex, flattened at the apex; left side deeply concave; suture deep; inclination to the left about 45°; aperture round-ovate; greatest breadth 0.17 inch; least breadth 0.13 inch; height 0.06 inch.

REMARKS.—The shell above described is *P. elevatus*, ADAMS, which is probably the young of Say's species. It is very nearly allied to the preceding, but differs in the elevation of the spire on the right side, and deeper concavity of the left, and in the absence of a medial carina; the last whorl is also often abruptly deflected downwards.

Planorbis hirsutus.—GOULD.

DESCRIPTION.—Shell horn-color, striate; epidermis green, with raised revolving hirsute lines; whorls three and a half, last one strongly carinate in mature shells, less so in the young, and in the former often abruptly deflected downwards near its termination; right side with a small narrow concavity; left side sometimes generally concave, sometimes like the right; inclination to the left about 40° to 50°, increasing with age; aperture nearly orbicular, scarcely modified by the intrusion of the penult whorl. Greatest breadth 0.31 inch; least breadth 0.25 inch; height 0.1 inch.

REMARKS.—The mature shell resembles *P. deflectus*, but is distinguished by the medial carina of the outer whorl. It very nearly resembles *P. albus* of Europe, and probably is not specifically distinct.

FAMILY COLIMACEA.

GENUS SUCCINEA.

Generic Characters.—Shell ovate or ovate-conic, umber-colored; aperture large, longer than wide; outer lip sharp, never reflected; columella not folded, thin; operculum wanting; animal with four tentacles, with the eyes at their summit as in *Helix*.



Succinea obliqua.—SAY.

DESCRIPTION.—Shell ovate, striate; whorls three, oblique; spire half as long as the aperture; last whorl very large and convex; aperture ovate, nearly as broad above as below, somewhat oblique.—Length 0.97 inch; breadth 0.55 inch; divergence 70°.

REMARKS.—In the New England states this shell is generally of a deep umber color, but in Ohio it is pale. It is found in moist grounds, under stones and wood. The animal is beautifully mottled with dark purple on a cream-colored ground. It goes into winter-quarters in October, forming a thin transparent epiphragm. The shell which we have described may be *S. campestris*, SAY, or more probably the latter is only a variety of *S. obliqua*.

Succinea ovalis.—SAY.

DESCRIPTION.—Shell ovate, somewhat conic, striate; whorls three; spire less than one-third as long as the aperture, small, conic; last very large, elongate, patulous; aperture very large, exhibiting much of the interior of the spire, ovate. Length 0.61 inch; breadth 0.3 inch; divergence 64°.

REMARKS.—This species is common about the margins of water. It is extremely fragile.

Succinea avara.—SAY.

DESCRIPTION.—Shell small, ovate, conic, striate; whorls three, very convex, with the suture very deeply impressed; spire conic, five-sevenths as long as the aperture, which is not large, ovate.—Length 0.3 inch; breadth 0.17 inch; divergence 67°.

REMARKS.—The shell which Say describes under the name of *S. vermeta* is probably the adult of this species. The aperture is proportionally larger in the young, as is also true of *S. obliqua*. When young a viscid substance attaches dirt to the shell, which becomes clean when mature.

GENUS BULINUS.

Generic Characters.—Shell ovate, or oblong-

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ovate, with the last whorl larger than the penult; aperture longer than wide; with the margins not continuous; columella smooth, sometimes truncate. No operculum. Animal of the form of the shell, with four tentacles, of which the larger are oculiferous. The number of species in this genus, including the sub-genus *Achatina*, exceeds two hundred. But not more than six or eight are known in the United States, and only one in New England.

Bulimus lubricus.—DRAP.

DESCRIPTION.—Shell oblong ovate, brown, shining; whorls six, moderately convex; suture well impressed; spire twice as long as the aperture, which is ovate; labrum a little thickened within, making a little more than a right angle with the columella, which is truncate. Length 0.26 inch; breadth 0.1 inch; divergence 45° in the upper part of the spire, below it is much less.

REMARKS.—This species, being common over a large part of Europe, is supposed by some to have been introduced thence into this country. It is remarkable, on this supposition, that it should have spread as far as the lake of the Woods and lake Winnipeg. As the divergence below the middle is very slight, the shell, when half grown, is nearly as wide as when mature.

GENUS PUPA.

Generic Characters.—Shell cylindrical; apex obtuse; aperture parallel to the axis of the shell, rounded below, more or less biangular above; margins reflected, separated by a lamina appressed on the columella. No operculum. Animal with the form of the shell; with four tentacles, of which the larger two are oculiferous at their summit, and the others are very minute.

Although a large portion of the exotic species exceed a half inch and many an inch in length, the native species are all minute, and some of them are the least of all our shells.

Pupa milium.—GOULD.

DESCRIPTION.—Shell ovate, brown, shining, with slight incremental striæ not discernible without a microscope; whorls five, convex; suture well impressed; apex very obtuse; aperture horizontally truncate above by the penult whorl, indented on the outer lip, with six teeth, of which one is at the indenture of the labrum, two very small teeth are in the lower part of the aperture, on the left side is a larger tooth double at its base, and at right angles to this are two on the horizontal margin; the umbilicus is large. Length 0.06 inch; breadth 0.03 inch.

REMARKS.—This species, the least of all which have been described in this coun-

try, was originally discovered in Middlebury. Its weight is 0.005 of a grain. It lives under moist decaying leaves, and at the foot of limestone ledges. None but a naturalist would find it.

Pupa ovata.—SAY.

DESCRIPTION.—Shell brown, ovate, tapering above the penultimate whorl; whorls five, convex, with a distinct suture; aperture small, ovate, with an indenture on the right side; with six primary teeth, of which two are on the transverse lip, viz. a large one on the middle, and a small one to its right; two are on the left and two on the right side; sometimes a very small tooth is found on the left part of the transverse lip. Length, 0.08 inch; breadth 0.05 inch.

REMARKS.—In color this species resembles *P. milium*, but is easily distinguished by its size and proportions, and the arrangement of the teeth. *P. modesta*, Say, for which this species has sometimes been mistaken, is described as having only four teeth.

Pupa badia.—ADAMS.

DESCRIPTION.—Shell reddish brown, cylindrical, very obtusely tapering in the two upper whorls; whorls seven, moderately convex, with a well impressed suture; aperture orbicular, less than one third of the length of the shell, with the margin slightly reflected, and the submargin contracted, with a single rather small tooth on the penultimate whorl; umbilicus moderate. Length 0.14; breadth 0.07 inch.

REMARKS.—This rare species was discovered by Prof. Benedict at Crown Point, where, only, it has yet been found. Its aperture is wider, and umbilicus less than in *P. marginata*, DRAP. of Europe, but it may be only a variety. It is easily distinguished by its mahogany color.

Pupa armifera.—SAY.

DESCRIPTION.—Shell oblong ovate, of a dingy white, striate; whorls seven, a little convex, with a moderately impressed suture; apex very obtuse; aperture subovate, with six teeth, of which the larger on the transverse lip is obliquely elongated, and nearly meets the labrum above; one is on the left side, and four are below and on the right side; of the latter, the first and fourth are the least, and are sometimes wanting. Length 0.17 inch; breadth 0.09 inch.

REMARKS.—This is the largest species of *Pupa* found in the United States, and by its color is distinguished from all which approximate to it in size. It occurs ple-

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tifully at Crown Point under stones in very dry situations. A few dead specimens have been found in Bridport, on the margin of lake Champlain, which may have been drifted from the opposite side.

Pupa albilabris.—WARD. Inedit.

DESCRIPTION.—Shell brown, finely striate, long-ovate, tapering above the penult whorl; whorls six, convex, with a well impressed suture; aperture a little less than half as long as the spire, without teeth, with a reflected, white, thick, flattened margin; umbilicus moderate.—Length 0.18 inch; breadth 0.07 inch.

REMARKS.—This species is well known as Say's *cyclostoma marginata*. As the latter specific name is preoccupied in the genus *Pupa*, to which it belongs, it has received the name under which we have described it. A very few specimens only have been found alive at Crown Point, and one dead on the Vermont shore of the lake.

Pupa contracta.—SAY.

DESCRIPTION.—Shell white, ovate, tapering above the body whorl; whorls five, convex, with a well impressed suture; aperture sub-triangular, with the transverse lamina raised, and forming with the labrum a continuous lip, much contracted in the throat, with three teeth, one on the transverse lip, large, prominent, and sinuous, another on the right side, where the throat is most contracted, and the third is merely a convexity caused by the fold of a large umbilicus. Length 0.1 inch; breadth 0.06 inch.

REMARKS.—This species is easily recognized by its elevated transverse lip. It is found under wood or stones in moist pastures.

Pupa Tappaniana.—WARD. Inedit.

DESCRIPTION.—Shell very small, pale horn color, translucent, tapering above the penultimate whorl; whorls a little more than five, convex, with a well impressed suture; aperture sub-orbicular, (the penult whorl cutting off about one-third of the circle,) about one-third of the length of the shell; margin sharp, with a narrow contraction in the sub-margin, beneath which is a thickening within, on which are the labial teeth; teeth eight, five primary and three secondary; of the former the largest is on the penultimate whorl, the next largest on the left side of the aperture; at the base, beginning at the left hand, is a primary, then a secondary, a primary, a secondary, a primary, and another secondary, extending nearly to the upper extremity of the right margin: the last three primaries are not con-

stant in size; umbilicus open. Length 0.08 inch; breadth 0.05 inch.

REMARKS.—This species is easily distinguished from the preceding by its teeth.



Pupa exigua.—SAY.

DESCRIPTION.—Shell white, shining, elongate, tapering above the penultimate whorl; whorls six, convex, with a well impressed suture; aperture ovate, with the upper lip oblique, margin reflected and thickened, teeth two, of which the larger is on the oblique lip, and the other, which is small, is on the left side; umbilicus distinct. Length 0.08 inch; breadth 0.03 inch.

REMARKS.—This shell is easily distinguished by its neat, shining appearance, and graceful form. It is more common than any other species of this genus in Vermont, and is found under stones and logs in moist places.

GENUS HELIX.

Generic Characters.—Shell orbicular or globose, usually convex or conoid above, but sometimes flattened; aperture wider than long, semi-elliptic or lunate, contiguous to the axis of the shell, with the outline interrupted by the intrusion of the penult whorl. No operculum. The animal, commonly called a *snail*, has four tentacles, of which the posterior pair are larger and oculiferous.



Helix albolabris.—SAY.

DESCRIPTION.—Shell globose-conic, with a light brown, sometimes reddish epidermis, with five parallel oblique incremental striae, and very minute revolving lines; whorls five and a half, convex, with a well impressed suture; aperture contracted by the labrum, which is white, flat, broadly reflected, and extends beneath to the centre of the shell, covering the umbilicus, which is open only in the young. Greatest breadth 1.35 inch; least breadth 1 inch; height 0.8 inch; divergence of the spire 135°.

REMARKS.—This species is found very commonly in most parts of Vermont. On the islands called the Four Brothers,

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in lake Champlain, it is abundant, in company with *Succinea obliqua*. The reddish variety is rare. The size of mature specimens is sometimes less than an inch in their greatest diameter. During the day, except in damp weather, they are confined to their retreats under logs and stones. Their eggs are white, nearly globular, and about 0.2 inch in diameter. The young shell does not receive the reflected lip until of its full size.

Helix thyroideus.—SAY.

DESCRIPTION.—Shell globose-conic, with a light brown, sometimes reddish epidermis, with five parallel oblique incremental striae; whorls five, convex, with a well impressed suture; aperture contracted by the labrum, which is widely reflected, flat, white, next the aperture, yellowish externally; inner margin with an oblique tooth; umbilicus partly covered by the reflected labrum, exhibiting only one volution. Greatest breadth 0.95 inch; least breadth 0.7 inch; height 0.47 inch; divergence 140°.

REMARKS.—This species is extremely rare in Vermont, but is more common in the western states. It might, at first, be confounded with the preceding, but is distinguished by the tooth on the inner margin of the aperture, the partially open umbilicus, and the yellow color of the outside of the labrum.

Helix dentifera.—BINNEY.

DESCRIPTION.—Shell depressed, with a yellowish horn-colored epidermis, with fine parallel oblique incremental striae; whorls five, with the suture distinct but not deep; aperture contracted by the lip, which is white, and broadly reflected; inner lip with a large tooth, long and parallel with the lower margin; umbilicus none. Greatest breadth 0.9 inch; least breadth 0.6 inch; height 0.44 inch; divergence 135°.

REMARKS.—This very rare species has been found only by Dr. Binney on the east side of the Green Mountains.

Helix palliata.—SAY.

DESCRIPTION.—Shell depressed, with a dark reddish brown epidermis, which is thickly covered, when in a perfect state of preservation, with acute hair-like projections; with numerous fine oblique incremental striae; whorls five, flattened, with a distinct suture; aperture much contracted and made three-lobed by the teeth; labrum white and broadly reflected; teeth three, of which one is long and curved, nearly covering the pillar lip; two are on the inner margin of the labrum; one above is acute and prominent,

and the other below is long and lamellar; the labrum is continued over the umbilical region in a white callus. Greatest breadth 0.9 inch; least breadth 0.6 inch; height 0.48 inch; divergence about 160°.

REMARKS.—This species, which is not rare in the western states, is seldom found in Vermont. It is easily distinguished from *H. tridentata* by the want of an umbilicus.

Helix monodon.—RACKETT.

DESCRIPTION.—Shell globose-conic, with a brown hirsute epidermis, with minute incremental striae; whorls six, with a distinct suture; aperture contracted by a deep groove behind the tip, which is white, reflected, flattened, covering more or less of the umbilicus, which is deep but not wide; inner lip with a compressed elongated tooth, parallel with the lower part of the margin. Greatest breadth 0.45 inch; least breadth 0.42 inch; height 0.26 inch; divergence 135°.

REMARKS.—In this description we have included *H. fraterna*, SAY, a variety in which the umbilicus is entirely covered by the labrum. As this is a variable character, and the other characters present no distinction, we cannot separate them. Rackett's name has the priority both of Say's description of the variety and of Ferrussac's use of the same name for another species. This is common on hill sides in rather dry places. Specimens vary in respect of size and the elevation of the spire.

Helix concava.—SAY.

DESCRIPTION.—Shell depressed, a little convex above, with fine oblique incremental striae; epidermis pale greenish horn color; whorls five, flattened above, elegantly rounded below, the outer one dilating towards the aperture, with a well impressed suture; labrum partially reflected below, simple above; inner lip with a thin callus, which connects the extremes of the labrum; umbilicus wide and deep, exhibiting all the volutions. Greatest breadth 0.75 inch; least breadth 0.6 inch; height 0.33 inch; divergence about 155°.

REMARKS.—This species is rare in Vermont, but more common in the western states. West of the Rocky Mountains it is of a much greater size, exceeding an inch in diameter.

Helix pulchella.—MULL.

DESCRIPTION.—Shell much depressed, pale horn color, nearly transparent, finely striate, with a colorless epidermis; whorls three and a half, convex, with a deep suture, the last one much larger than the

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preceding; aperture nearly orbicular, dilated; labrum much thickened, white, reflected, scarcely interrupted by the intrusion of the penultimate whorl; umbilicus large. Greatest breadth 0.095 inch; least breadth 0.078 inch; height 0.05 inch; divergence 160°.

REMARKS.—This species is remarkable for its wide geographical distribution. It is common in Great Britain and a large part of Europe, and in this country is found as far south as South Carolina, as far west as Council Bluffs, and as far east as Maine. It is very abundant in some parts of Vermont. It is the *H. minuta* of Say.

Helix Sayii.—BINNEY.

DESCRIPTION.—Shell depressed globose, with numerous fine oblique incremental striæ; epidermis very light brown, shining; whorls five and a half, convex, with a well impressed suture; labrum white, narrow, reflected, with a small rounded tooth on the inner edge below; inner lip with a small oblique tooth on the middle; umbilicus not very wide but deep and exhibiting all the volutions. Greatest breadth 1 inch; least breadth 0.8 inch; height 0.55 inch; divergence 135°.

REMARKS.—This species was originally described by Say with the name of *H. didonta*, but as this name had been preoccupied, Dr. Binney proposed that of *H. Sayii*. The species is rare in Vermont. It is easily recognized by its narrow lip and two small teeth, of which, however, the one on the inner margin is sometimes wanting.

Helix tridentata.—SAY.

DESCRIPTION.—Shell depressed, a little convex above, with crowded oblique incremental striæ; epidermis brown; whorls five, a little flattened above, with a distinct suture; aperture three-lobed, contracted by a groove behind the labrum, which is white, reflected, flattened, furnished with two acute prominent teeth; inner lip with a prominent, oblique and slightly curved tooth; umbilicus rather wide, deep.

REMARKS.—This species is widely distributed, having been found in Florida, and in the western states. In the former region it is very small, in the latter very large. In Vermont it is of an intermediate size.

Helix labyrinthica.—SAY.

DESCRIPTION.—Shell small, elevated conic above, flattened below, with very coarse, regular, oblique incremental striæ, so crowded that the intervening spaces are rounded ribs, which are obsolete be-

neath; epidermis brown, sometimes inclining to horn color; whorls six, convex, with a well impressed suture; labrum thickened, reflected, and usually reddish brown; inner margin with two compressed, perpendicular, parallel teeth, which are prolonged into the throat of the aperture, resembling the track of a rail road; but the lower tooth is smaller, and sometimes obsolete; umbilicus narrow and not deep. Greatest breadth 0.1 inch; least breadth 0.08 inch; height 0.08 inch; divergence 135° in the upper third, half as much below.

REMARKS.—This beautiful little shell is at once distinguished by its peculiar teeth. The aperture is sometimes of an elegant red color. It is found under leaves in the forests, and at the foot of limestone ledges. It occurs as far west as Council Bluffs.

Helix indentata.—SAY.

DESCRIPTION.—Shell much depressed, convex above, shining, of a pale horn color, nearly transparent, with distant, nearly equi-distant impressed transverse lines, of which there are 25 to 30; there is often an impressed line parallel with and immediately below the suture; whorls four and a half, slightly convex, with a distinct impressed suture, and rapidly enlarging; aperture large; labrum sharp, terminating beneath at the centre of the shell, where is a deep indentation rather than umbilicus. Greatest breadth 0.18 inch; least breadth 0.15 inch; height 0.08 inch; divergence 160°.

REMARKS.—This species resembles *H. arborea*, SAY, but is distinguished by its distant impressed lines, by the enlargement of the last whorl, and the want of an umbilicus. It is rare.

Helix arborea.—SAY.

DESCRIPTION.—Shell somewhat depressed, convex above, shining, of a pale horn color or brown, nearly transparent, with very fine crowded incremental striæ; whorls nearly five, convex, with a well impressed suture; aperture a little modified by the intrusion of the penult whorl; labrum sharp; umbilicus deep, about three fourths as wide as the last whorl. Greatest breadth 0.3 inch; least breadth 0.26 inch; height 0.15 inch; divergence 135°.

REMARKS.—This very common species is found both in a dry and in a wet station. In the former, the shell and the animal are of a pale horn color, and smaller. In the latter the shell is brown, and the animal nearly black. The dimensions above given are of a large specimen of the latter variety. The species is very

widely distributed through the United States and Missouri Territory.

Helix electrina.—GOULD.

DESCRIPTION.—Shell much depressed, convex above, shining, of a pale horn color, sometimes yellowish or brownish, nearly transparent, with numerous very fine inequidistant impressed lines or striæ of growth; whorls three and a half, slightly convex, with a well impressed suture, and an impressed line immediately below the suture, and parallel with it; the last whorl rapidly enlarging; aperture large, slightly modified by the intrusion of the penult whorl; labrum sharp; umbilicus narrow and deep. Greatest breadth 0.2 inch; least breadth 0.16 inch; height 0.1 inch; divergence 165°.

REMARKS.—This species much resembles *H. indentata* above, but has the striæ much more numerous, and usually one whorl less; beneath the resemblance to *H. arborea* is equally striking, but the umbilicus is not so wide. Without examination of both sides, it is very liable to be confounded with one or the other of the above species. It has been found in Missouri, Ohio, Massachusetts, New York and Vermont.

Helix inornata.—SAY.

DESCRIPTION.—Shell much depressed, convex above, shining, with very fine oblique incremental striæ; epidermis brown horn color; whorls five, slightly convex, with a distinct but not deep suture; the last whorl much larger than the preceding; aperture very wide, much modified by the intrusion of the penultimate whorl, with an opaque white deposit within, which is a little distant from the sharp labrum; the latter extends nearly to the centre of the shell, projecting into the small umbilicus. Greatest breadth 0.55 inch; least breadth 0.47 inch; height 0.27 inch; divergence 165°.

REMARKS.—A single specimen only of this species has been found in Vermont, in Middlebury. It closely resembles *H. cellaria*, Mull.

Helix fuliginosa.—GRIFFITH.

DESCRIPTION.—Shell globose-conic, with very minute irregular oblique striæ of growth; epidermis dark smoky brown; whorls four and a half, convex, with a well impressed suture; the last whorl much larger than the preceding; aperture nearly orbicular, not much modified by the intrusion of the body whorl, with a very thin deposit on the inside; umbilicus deep, moderately wide. Greatest breadth 0.95 inch; least breadth 0.8 inch; height 0.5 inch; divergence 135°.

REMARKS.—This species is not common. It resembles the preceding, but differs in size, color, form of the aperture, and greater width of the umbilicus. It is the *H. lucubrata* of Say, a name perhaps entitled to preference, since that of Griffith, although previously in use in cabinets, was not published until after Say's name had appeared in print.

Helix multidentata.—BINNEY.

DESCRIPTION.—Shell much depressed, conoid above, shining, reddish brown, translucent, with very fine, somewhat regular impressed lines or striæ of growth; whorls seven, narrow, convex, often with a very small impressed line revolving just above the suture, which is deep; the whorls increasing but slightly in diameter; aperture narrow, very much modified by the intrusion of the penult whorl; labrum sharp; teeth in rows, far within the aperture, on its outer and lower half; the rows are curved, with the convexity towards the aperture, and contain from 4 to 6 closely approximate teeth, appearing through the shell, under a magnifier, like glass beads; the number of rows varies from two to four, of which one only is visible from the aperture; the umbilicus is very narrow and deep. Greatest breadth 0.12 inch; least breadth 0.11 inch; height 0.06 inch; divergence 150°.

REMARKS.—This elegant little species was discovered by Dr. Binney in Stratford, and has since been found in Middlebury, also in New York, at Malone. It has so little resemblance to any other species, that comparison is unnecessary.

Helix minuscula.—BINNEY.

DESCRIPTION.—Shell depressed, whitish horn color, with microscopic incremental striæ; whorls more than four, very convex, with a deep and very conspicuous suture; last whorl not much larger than the preceding; aperture nearly circular, not much modified by the intrusion of the penult whorl; labrum sharp; umbilicus very large. Greatest breadth 0.08 inch; least breadth 0.07 inch; height 0.03 inch; divergence about 150°.

REMARKS.—This little species has been found in Ohio and in this state. In size and color it is like *H. pulchella*, but in the other characters is at once distinguished.

Helix lineata.—SAY.

DESCRIPTION.—Shell very much depressed and discoid, with parallel equidistant raised revolving lines; epidermis green; whorls four and a half, very convex, narrow, with a deep suture, last whorl very little enlarged; aperture lunate, very much modified by the intrusion

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of the penult whorl; labrum sharp; umbilicus concave, very broad and deep, exhibiting very distinctly all the volutions to the apex; far within the aperture may often be seen a pair of conical teeth on the inner side of the outer whorl, one on the middle, the other below; sometimes one is obsolete; often a second and sometimes a third pair may be seen through the sides of the shell much farther within. Greatest breadth 0.14 inch; least breadth 0.13 inch; height 0.06 inch; divergence never less than 160° , usually 170° .

REMARKS.—Above, this shell resembles *H. multidentata*, in the depression of the spire and narrowness of the whorls, but in the other characters is very different. No other native species has such revolving minute carinæ. It has been found in the northern and middle states.

Helix striatella.—ANTH.

DESCRIPTION.—Shell depressed-convex, with very much crowded deep incremental striæ; epidermis reddish or yellowish brown; whorls four, convex, with a well impressed suture, moderately increasing in diameter; aperture nearly circular, slightly modified by the intrusion of the penult whorl; labrum sharp; umbilicus not so wide as the last whorl, deep, distinctly exhibiting the volutions to the apex. Greatest breadth 0.25 inch; least breadth 0.22 inch; height 0.12 inch; divergence 140° to 150° .

REMARKS.—This species is quite common in Vermont. It resembles *H. perspectiva*, SAY, a species, which has not been found in the New England states. The latter has one or two more whorls, the umbilicus much wider, and the striæ much coarser. It is also a larger shell. This species does not appear to differ from the European shell, *H. ruderata*, STÜDER. Comparing specimens from Stiria with those of Vermont, we are unable to detect any difference. But as some naturalists are not convinced of their identity, we have retained the name of the American author, although the European name has the priority of many years.

*Helix alternata*.—SAY.

DESCRIPTION.—Shell depressed-convex, with acute, raised, equi-distant obliquely curved striæ, which render the shell scabrous; epidermis horn color, variegated with rufous spots and bars obliquely arranged; whorls six, convex, with a well

impressed suture; aperture very oblique, nearly circular, brilliant, sometimes pearly within; labrum sharp; umbilicus broad and deep, exhibiting all the volutions; beneath, the colored bars are more regular, and converge into the umbilicus: they are interrupted by a colorless zone a little below the middle of the last whorls. Greatest breadth 1 inch; least breadth 0.87 inch; height 0.59 inch; divergence 125° to 135° .

REMARKS.—This species has been found throughout most of the territory of the United States. It is very common in this state, living under stones and logs on hill-sides in rather moist but not wet places. When young, its outline is carinated. It resembles the *H. radiata*, of Europe, but cannot be mistaken for any other American species.

Helix chersina.—SAY.

DESCRIPTION.—Shell elevated and conic above, convex and shining beneath, striæ of growth excessively minute; epidermis brownish amber-colored; whorls six, very convex, with a deep suture, not increasing much, so that the last is but little larger than the penultimate whorl; aperture very wide, reaching to the axis beneath, much modified by the intrusion of the penultimate whorl; labrum sharp; umbilical region indented. Greatest breadth 0.115 inch; least breadth 0.105 inch; height 0.09 inch; divergence 90° .

REMARKS.—This and *H. labyrinthica* are distinguished from other native species of *Helix* by the elevation of the spire, and are very distinct from each other in most characters other than size and form. The species is not very rare in this state, and having been found in Georgia and the North West Territory, is, no doubt, widely dispersed. From its minute size it is liable to escape detection.

FAMILY LIMACIANA.

GENUS VITRINA.

Generic Characters.—Shell with a depressed, convex, obtuse spire, with but few whorls, of which the last is extremely large; the aperture is very large, wider than long, interrupted by the penult whorl; umbilicus wanting. The shell is extremely thin and transparent, and is capable of containing only a part of the animal. No operculum. The animal is much too large to enter the shell, resembling a *Helix*. It is long, mostly straight, with the posterior part distinct, spiral, protected by the shell; with four tentacles, of which the anterior pair is very short.

Vitrina pellucida.—DRAP.

DESCRIPTION.—Shell globose-discoid, shining, with the incremental striæ ex-

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cessively minute, transparent, and nearly colorless; whorls two and a half, scarcely convex, with the suture but little impressed, sometimes with a slightly impressed line revolving near the suture; aperture elliptic, not much modified by the intrusion of the penultimate whorl; labrum thin and sharp; inner lip slightly reflected. Greatest breadth 0.24 inch; least breadth 0.18 inch; height 0.12 inch; divergence about 160°.

REMARKS.—This species, well known over a large part of Europe, was observed first on this continent by Mr. Say, who remarks that it "was first found near Coldwater Lake, in lat. 48½ N., under stones, fallen timber, &c. It afterwards occurred, in similar situations, until we approached Lake Superior, when it was no more seen." This side of Lake Superior it has been found only at Rogers' rock, near the N. E. extremity of Lake George, within the space of a square rod. As it occurred so near to Vermont, and will very probably be found within its limits, we have included it among our species. It does not appear to differ from the European shell, except in the want of a greenish tinge.

GENUS LIMAX.

Generic Characters.—Animal without a shell, oblong, convex above, furnished with a leathery shield over the anterior dorsal region; beneath with a flattened longitudinal foot; with four tentacles, of which the posterior pair are larger and oculiferous; with the branchial cavity beneath the shield, opening on the right side.

The species of this and of kindred genera are commonly *slugs*, or *snails*, from their resemblance to the inhabitants of snail shells. In turning over stones and logs or boards, they are often seen.

Limax campestris.—BINNEY.

DESCRIPTION.—"Color usually of various shades of amber, without spots or markings, sometimes blackish; head and tentacles smoky. Body cylindrical, elongated, terminating in a very short carina at its posterior extremity, mantle oval, fleshy, but little prominent, with five concentric lines; back covered with prominent, elongated tubercles and furrows; foot narrow, whitish; respiratory foramen on the posterior dextral margin of the mantle; body covered with a thin watery mucus. Length about one inch."

REMARKS.—This species is smaller than *L. agrestis*, LINN. "The tuberosities of the surface are more prominent in proportion to their size, are not flattened or plate like, and are not separated by darker colored anastomosing lines, the intervening lines being of the same color as the gen-

eral surface." It is found under wood and stones in various situations.

GENUS TEBENNOPHORUS.—Binney

Generic Characters.—"Mantle covering the whole superior surface of the body; pulmonary cavity anterior, orifice on the right side towards the head; orifice of the rectum contiguous to and a little above and in advance of the pulmonary orifice; organs of generation united, orifice behind and below the superior tentacle of the right side; without testaceous rudiment, terminal mucous pore, or locomotive band of the foot."

Tebennophorus Caroliniensis.—Bosc.

DESCRIPTION.—Body whitish, with brownish or blackish spots arranged in three ill defined, longitudinal, anastomosing bands, with small spots between; inferior margin cream colored; foot whitish; superior tentacles knobbed at the extremity, with the eyes on the upper part of the knob; "cuticle covered with irregular, veriform glands, anastomosing with each other, and having a general tendency to a longitudinal direction, with shallow furrows between, lubricated with a watery mucus." Length, when fully extended, upwards of three inches.

REMARKS.—This species inhabits forests, in damp, shaded places, about decaying wood. In the cabinet of Middlebury college are two specimens, which were taken from the nest of the brown hawk, (*Falco fuscus*, GM.)

GENUS PHILOMYCUS.—Rafinesque.

Generic Characters.—Animal resembling the preceding, but entirely destitute of a mantle.

Philomycus dorsalis.—BINNEY.

DESCRIPTION.—"Color of upper surface ashy, with a shade of blue, an uninterrupted black line extending down the centre of the back; superior tentacles black, about one eighth of the length of the body; lower tentacles blackish, very short; body cylindrical and narrow, terminating posteriorly in an acute point; base of foot white, very narrow, its separation from the body not well defined; upper surface covered with elongated and slightly prominent glandular projections, the furrows between indistinct; respiratory orifice very minute, situated on the right side, about one eighth of an inch behind the insertion of the superior tentacle." Length nearly an inch.

REMARKS.—This species is found in the forests, in the soil about decaying wood. It is probably not very common.

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FAMILY CALYPTRACIANA.

GENUS ANCYLUS.

Generic Characters.—Shell thin, oblong-elliptic, obliquely conic; apex acute, curved backwards; aperture elliptic; margins sharp. Animal covered, not concealed, by the shell, with two compressed tentacles and the eyes on the inner part of the base; foot elliptic, not so wide as the body.

Ancylus parallelus.—HAIDEMAN.

DESCRIPTION.—Shell nearly transparent, oblong-ovate; epidermis thin, horn color; sides straight, slightly divergent forwards; apex subacute, moderately elevated, with two fifths of the length of the shell behind, leaning to the right. Length 0.25 inch, width 0.15 inch, height 0.08 inch.

REMARKS.—This species is found in streams and ponds in many parts of the New England states. It was supposed to be Say's *A. rivularis*, not on account of any resemblance between the two shells, but from the meagerness of the description. From some remarks of this learned naturalist, comparing *A. rivularis* with *A. tardus*, it seems probable that the former is not an elongate species.

Ancylus tardus.—SAY.

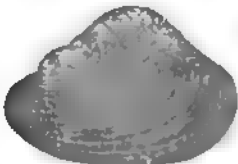
DESCRIPTION.—Shell nearly transparent, elliptical; epidermis thin, horn color; sides somewhat curved; apex subacute, elevated, a little behind the middle, leaning backwards but scarcely to the right. Length 0.25 inch, width 0.16 inch, height 0.13 inch.

REMARKS.—This is at once distinguished from the preceding by its proportions. *A. rivularis* differs in having the apex more on one side, and one end distinctly wider than the other.

FAMILY NAIADES.

GENUS ANODONTA.

Generic Characters.—Shell equivalve, inequilateral, transverse; hinge toothless; the two muscular impressions remote; ligament long. The shell is usually very thin. Animal with the lobes of the mantle entirely separate.

*Anodonta benedictensis*.—LEA.

DESCRIPTION.—Shell ovate-trapezoidal, thin; epidermis coarsely striate, yellow-

ish or greenish brown, usually with two or three dark green rays posteriorly, in old shells of a very dark color, obscuring the rays; beaks rather small, wrinkled, approximate; discs moderately inflated; anterior side two thirds to one half as long as the posterior; hinge margin straight; anterior and posterior margins straight and divergent above, below abruptly rounded into the basal margin, which is moderately curved throughout, except in old shells, in which it is straight or even incurved in the middle. Dimensions of two specimens: No. 1, length 4.5 inches, height 2.75 inches, width 1.7 inch; No. 2, length 3.87 inches, height 2.5 inches, width 1.5 inch.

REMARKS.—It will be seen in the above measurements, that the proportionate length is subject to considerable variation, which affects only the posterior side, and in part is a sexual distinction. This species is abundant in Lake Champlain, but is not found elsewhere. It is much larger than any other Anodonta in this state.

Anodonta marginata.—SAY.

DESCRIPTION.—Shell ovate, widest below the beaks, thin; epidermis yellowish and greenish brown, with very irregular striae of growth; beaks rather prominent, with numerous small wrinkles; discs moderately inflated, flattened; anterior side about two fifths as long as the posterior; hinge margin curved; posterior margin slightly curved in a descent of one third of the length of the shell, then rapidly rounding into the basal margin, which is nearly straight at and behind the middle; anterior margin regularly rounded. Interior bluish. Length 3.8 inches, height 1.6 inch, width 1.15 inch.

REMARKS.—This species may be most easily distinguished from the *A. undulata* by the greater size and very minute wrinkles of the beaks, and the flattening of the umbo. It has been found in Otter Creek at Wallingford. If it be not the *A. marginata* of Say, that species cannot now be recognized. It has been found more abundantly in Massachusetts by Dr. Gould, on whose authority I have given it this name.

Anodonta fluviatilis.—DILLWYSE.

DESCRIPTION.—Shell oblong-ovate, widest behind the beaks, thin; epidermis smooth, yellowish, and brownish green, olivaceous posteriorly and above, where are a few obscure dark rays; beaks quite small, with numerous small wrinkles; discs moderately inflated, convex; anterior side between a third and a fourth as long as the posterior; hinge margin

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straight, rising into a wing posteriorly; posterior margin very obliquely descending to a truncate extremity; inferior margin nearly straight; anterior margin regularly rounded; interior surface bluish, iridescent. Length 2.4 inches, height 1.25 inch, width 0.9 inch.

REMARKS.—A few small specimens of this species have been found in Middlebury. In Massachusetts and further south it attains a much greater size. It is very similar to the preceding, but is distinguished by its wing, small beaks, and convex disc. It more nearly resembles *A. cygnea* of Europe.

Anodonta undulata.—SAY.

DESCRIPTION.—Shell oblong ovate, widest behind the beaks, not thin, with coarse and fine striæ of growth; epidermis yellowish, brownish, or blackish green, with numerous irregular dark green rays, which are obscured when the general color is dark; beaks quite prominent, much undulated; discs moderately inflated, convex; anterior side usually less, sometimes more than one third as long as the posterior; hinge margin nearly straight; posterior margin descending in a curve through a third of the length of the shell, then abruptly rounded into the inferior, which is slightly curved or straight; anterior margin regularly rounded; interior bluish, but often covered with a light salmon colored nacre, with a dark blue or brown margin; hinge with obsolete teeth. Dimensions of two specimens: No. 1, length 2.75 inches, height 1.4 inch, width 0.85 inch. No. 2, length 2.65 inches, height 1.45 inch, width 1.1 inch.

REMARKS.—This species is found in small streams and in lake Champlain.—When the epidermis is of a light color and the rays conspicuous, it is a very beautiful shell. More frequently it is dark, and the appearance unattractive. It is intermediate between this genus and the next.

GENUS ALASMODONTA.

Generic Characters.—Shell as in *Anodonta*, but furnished with a stout, striated, and simple or divided cardinal tooth in each valve; also the shell is usually thicker. Animal as in *Anodonta*.

*Alasmodonta arcuata*.—BARNES.

DESCRIPTION.—Shell very long ovate, arcuate; epidermis black, or brownish

black, with very distinct striæ of growth, very much developed at the margin; beaks small, depressed, much eroded; discs moderately inflated, flattened; anterior sides more than one-fourth as long as the posterior; hinge margin regularly curved into the posterior, which descends at first very obliquely, and is then irregularly rounded into the basal margin; this is incurved, and the anterior is regularly rounded; interior with a brilliant, thick nacre, iridescent posteriorly. Length 4.9 inches; height 2.2 inches; width 1.35 inch.

REMARKS.—This species has been found at Burlington. It has been considered identical with *Unio margaritiferus* of Europe, but that shell is shorter, and has the beaks more central and elevated. It yet more nearly resembles the *Unio sinuatus* of Europe, which is higher and has the beaks more central. Perhaps it may not be distinct from the latter. The young have the basal margin straight. It is found throughout New England.

Alasmodonta rugosa.—BARNES.

DESCRIPTION.—Shell ovate; epidermis with irregular incremental striæ, which are mostly fine, greenish brown; beaks small, not prominent, undulate; discs flattened, with two ridges extending posteriorly in slightly curved lines, between and above which the surface is crowded with numerous crowded wrinkles, which, for the most part, run posteriorly and upwards; anterior side much depressed, about one-third as long as the posterior; hinge margin arcuate behind the teeth, otherwise nearly straight, ascending posteriorly; posterior margin descending in a straight line to the upper umbonal angle; extremity truncate between the umbonal angles; inferior margin nearly straight; anterior margin regularly rounded; inner surface often with a light salmon-colored deposit. Length 4.1 inches; height 2.3 inches; width 1.25 inch.

REMARKS.—This species is common in the western states, where it attains a greater size. Lake Champlain and the streams west of the Green Mountains appear to be the most eastern limit of its habitation.

Alasmodonta undulata.—SAY.

DESCRIPTION.—Shell ovate, epidermis smooth, blackish or greenish brown, with obscure darker rays; beaks large and prominent, with large and deep undulations; discs much inflated and convex, with a ridge more or less obtuse extending posteriorly; anterior side small, one-sixth to one-third as long as the posterior; hinge margin sinuous or simply curved;

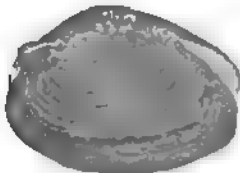
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posterior margin descending obliquely in a straight or slightly curved line, rounded below; inferior margin slightly curved; anterior margin regularly rounded; inner surface bluish, sometimes with a light salmon-colored nacre anteriorly or throughout. Dimensions of two specimens: No. 1, length 2.2 inches; height 1.4 inch; width 1.03 inch. No. 2, length 2.06 inches; height 1.2 inch; width 0.9 inch.

REMARKS.—This species is rather common in the northern middle states.—When young the epidermis is of a lighter color, the rays are more conspicuous, and the shell is shining and beautiful.

GENUS UNIO.

Generic Characters.—Shell as in *Alasmodonta*, but is also furnished with very long lamellar lateral posterior teeth, usually one on the right valve entering between two on the left. Very rarely the right valve has one entering between two on the left. The cardinal teeth are often double, sometimes triple. Animal as in *Asolonta*.



Unio alatus.—SAY.

DESCRIPTION.—Shell ovate-triangular, moderately thick; epidermis olive, or brownish green, with numerous fine and some coarse striae of growth; beaks small, not prominent, in the young shell exhibiting small wrinkles; discs moderately inflated posteriorly, compressed anteriorly, with one or two small posterior angles above; anterior side small, one-fourth to one-fifth as long as the posterior, hinge margin straight, very much elevated behind into a triangular connate wing, the posterior margin of which is incurved; the remainder of the posterior and the anterior margins are regularly rounded; inferior margin nearly straight; inner surface usually purplish red, rarely very pale red, sometimes of a rich reddish salmon color; cardinal teeth rather small. Dimensions of two specimens: No. 1, length 5.3 inches; height 3.85 inches; width 1.75 inch. No. 2, length 5.9 inches; height 3.85; width 2.2 inches.

REMARKS.—No 2 is a very old shell. In such the wing is nearly obsolete, and consequently the form is more ovate. This species is very abundant in Lake Champlain, east of which it has never

been found. In the western states it is common.

Unio gracilis.—BARNES.

DESCRIPTION.—Shell ovate-triangular, rather thin; epidermis straw-color, coarsely striate near the margins, otherwise smooth and shining; beaks small, not prominent, smooth; discs considerably inflated, convex, with two or three slight ridges proceeding posteriorly above; anterior side small, compressed, about one-third as long as the posterior; hinge margin nearly straight, much elevated posteriorly into a triangular connate wing, of which the posterior margin is incurved; other margins regularly rounded, the basal moderately; inner surface iridescent, bluish, pink above; cardinal teeth very small. Length 5 inches; height 3.5 inches; width 1.6 inch.

REMARKS.—This species has the form and size of the preceding, but is easily distinguished by the color of the epidermis, of the nacre, greater inflation, and thinness. It is common in lake Champlain, and, like *U. alatus*, is not found any farther to the eastward, but is common through the western states.

Unio compressus.—LEA.

DESCRIPTION.—Shell oblong-ovate, not thick; epidermis grass-green, or olivaceous, with numerous irregular yellowish rays, with distinct striae; beaks small, pointed, much wrinkled; discs moderately inflated posteriorly, scarcely convex; anterior side three-sevenths to three-eighths as long as the posterior; hinge margin straight, rising posteriorly into a slightly elevated wing, which is often more or less connate; posterior margin descending obliquely in a straight line to a somewhat rounded truncate extremity; inferior margin somewhat rounded; anterior margin regularly rounded; interior bluish, sometimes tinged with pale brownish yellow; cardinal teeth much compressed, on the left valve deeply and broadly bifid, or even trifid; of the lamellar teeth of the left valve one is very small. Length 2.85 inches; height 1.6 inch; width 0.8 inch.

REMARKS.—This species also is found in the western states, and has its eastern limit in the streams west of the Green Mountains. It is much larger in the west.

Var. plebeius.—ADAMS. Epidermis olivaceous, rays obscure; wing scarcely elevated; lamellar teeth very small, with the three divisions of the left cardinal very remote. Length 4.3 inches; height 2.3 inches; width 1.25 inch. This variety is found in a small brook in Middlebury.

FRESH WATER AND LAND SHELLS.

Unio complanatus.—LEA.

DESCRIPTION.—Shell oblong, rather thick; epidermis blackish or greenish brown, sometimes yellowish, with numerous irregular green rays; striae of growth rather coarse; beaks rather prominent, small; discs compressed, sometimes considerably inflated, but always flattened; anterior side from one-fifth to one-third as long as the posterior; hinge margin nearly straight; posterior margin a little curved, oblique; inferior margin straight, sometimes a little incurved or excurved; anterior margin well rounded; nacre purplish red, pink, sometimes light salmon color, rarely white; lamellar teeth nearly straight; cardinal teeth double. Dimensions of three specimens: No. 1, length 3.9 inches; height 2 inches; width 1.4 inch. No. 2, length 3 inches; height 1.53 inch; width 0.8 inch. No. 3, length 3.05 inches; height 1.53 inch; width 1.36 inch.

REMARKS.—This species is subject to great variations of form, of which the most remarkable in this state is that of a gibbous variety in lake Champlain. No. 3 is an example; No. 2 exhibiting on the contrary a very compressed form. This species is the most common of the Naiades in this, as in the other New England states. Immense numbers cover the shores of lake Champlain.

Unio siliquoides.—BARNES.

DESCRIPTION.—Shell ovate, not very thick; epidermis yellowish or somewhat greenish brown, with numerous irregular green rays, shining; striae of growth usually rather fine; beaks small, rather prominent, wrinkled; discs convex, tumid; anterior side a little more or less than one-third as long as the posterior; inferior margin sometimes curved, sometimes straight; other margins rounded; nacre clear white, sometimes light salmon color; cardinal teeth equally bifid in the left valve, unequally in the other; lateral teeth a little curved, not long. Dimensions of three specimens: No. 1, length 2.7 inches; height 1.9 inch; width 1.3 inch. No. 2, length 2.43 inches; height 1.3 inch; width 0.85 inch. No. 3, length 3.05 inches; height 1.65 inch; width 1.4 inch.

REMARKS.—This species, although always ovate, varies much in the ratios of the three dimensions. To illustrate this, the above measurements are taken from examples of the greatest extremes; No. 1, of height; No. 2, of length; and No. 3, of width. The largest individuals are about 4 inches in length. According to Mr. Lea this species is *U. luteolus*, LA-

MARCK, and the latter name has the right of priority; but according to others, Lamarck's species above quoted is *U. cariosus*, SAY. We therefore, provisionally, give the preference to the name affixed by Mr. Barnes.

Unio ventricosus.—BARNES.

DESCRIPTION.—Shell short, ovate, not very thick; epidermis usually pale yellowish brown, with green rays, of very unequal width, sometimes numerous, often obsolete, except on the corselet; smooth and shining; beaks large and prominent, wrinkled; umbones very tumid, with a more or less distinct angle extending to the bottom of the posterior margin; discs convex; anterior side about half as long as the posterior; hinge margin sinuous; posterior extremity irregularly rounded, in the females high and truncate, in the males somewhat tapering and produced; inferior margin more or less rounded; anterior extremity depressed, well rounded; nacre white; cardinal teeth not large, deeply bifid; lamellar short, distant from the beaks. Dimensions of three specimens: No. 1, length 5.5 inches; height 3.3 inches; width 2.3 inches. No. 2, length 3.35 inches; height 2.35 inches; width 1.77 inch. No. 3, length 3.8 inches; height 2.3 inch.; width 1.83 inch.

REMARKS.—The variations of form are for the most part those of sex, as exhibited in the above measurements. Nos. 1 and 3 are males, No. 1 being unusually large. No. 2 is a female. This species is not rare in lake Champlain, which is its most eastern limit. It is common in the western states.

Unio rectus.—LAMARCK.

DESCRIPTION.—Shell very long ovate, thick; epidermis olivaceous above or throughout, usually yellowish brown below, but nearly covered with dark, broad, more or less confluent, green rays; beaks rather prominent, smooth; discs moderately inflated, scarcely convex; anterior side about one third as long as the posterior; hinge margin slightly curved; posterior extremity sub-rostrate; inferior somewhat curved, straight, or in females incurved; anterior margin rounded; nacre white, pink above; cardinal teeth pink, double, both divisions stout on the left valve, also the inner one on the right. Length 5.75 inches; height 2.3 inches; width 1.55 inch.

REMARKS.—This species is common in the western states, and has its most eastern limit in lake Champlain, where it is rare. The females are much higher in the posterior half, in consequence of a development of the inferior margin.

FRESH WATER AND LAND SHELLS.

FAMILY CONCHACEA.

GENUS CYCLAS.

Generic Characters.—Shell small, thin, globose-elliptic, hinge with two minute cardinal teeth in each or in one valve, which are sometimes obsolete, with compressed lateral teeth on each side. Animal with the mantle posteriorly prolonged into two siphons, which have no retractor muscle; foot very thin and long.

*Cyclas elegans.*—ADAMS.

DESCRIPTION.—Shell subglobular, rhombic-orbicular, equilateral, finely and elegantly striated; epidermis rather light olive green, with two straw-colored concentric zones, of which the exterior is marginal; beaks not prominent, slightly undulate; umbones very thin; within bluish; lateral teeth large and strong; cardinal teeth rudimentary. Length 0.43 inch; height 0.36 inch; width 0.26 inch.

REMARKS.—This species was discovered in Weybridge, in a swamp, near the site of an old Indian encampment. It has also been found at Burlington. It is remarkable for its shining and elegantly striated surface, and for its inflation, which continues far over the disc, and terminates abruptly near the margin. *C. rhomboida*, SAY, resembles it, but has coarse striæ, no yellow zones, and the discs are less inflated. This is a rare species, and the most beautiful of the genus in our knowledge.

Cyclas similis.—SAY.

DESCRIPTION.—Shell subelliptic, nearly equilateral; epidermis dark brown or yellowish and greenish brown; striæ of growth coarse, deep; umbones not much inflated, broad; disc rather tumid; anterior and posterior margins subrectilineal and divergent; inferior and superior margins rounded; within bluish; cardinal teeth small; lateral teeth compressed, strong. Length 0.68 inch, height 0.5 inch, width 0.4 inch.

REMARKS.—The form of the young differs much from that of the adult. It is rectangular, longer than high, and much compressed. This species differs from the preceding in the coarseness of the striæ; the discs near the margin are less tumid, and the form is much less quadrilateral, and the young, although quadrilateral, are longer and much more compressed. Sometimes there are in this species also yellow zones.

Cyclas rhomboida.—SAY.

DESCRIPTION.—Shell rhombic, nearly equilateral, very coarsely striate; epidermis yellowish horn color; beaks not prominent, nor undulate; umbones prominent; discs moderately tumid; anterior and posterior margins nearly straight, divergent; superior and inferior margins moderately curved; within white; cardinal teeth rudimentary, lateral teeth strong. Length 0.46 inch, height 0.38 inch, width 0.27 inch.

REMARKS.—This species is very nearly allied to the preceding, but the difference is constant. That shell is longer, and the umbones less elevated. The young of this species, although rectangular, are more tumid, which is the cause of the difference in the umbones of mature shells. This species is very plentiful in lake Champlain, and is the only one which occurs in the open waters of the lake in its southern part.

Cyclas partumeia.—SAY.

DESCRIPTION.—Shell ovate-globose, higher behind, nearly equilateral, very thin, translucent, rather finely striate; epidermis shining, straw color, or bluish horn color; beaks not prominent; umbones moderately tumid; discs much inflated and quite regularly convex; posterior and hinge margins nearly straight; other margins much rounded; cardinal teeth small; lateral teeth much developed, compressed. Length 0.3 inch, height 0.25 inch, width 0.17 inch.

REMARKS.—This species inhabits stagnant water, and even swamps which are dried during the autumn. The young are less tumid, very regularly elliptical, and of a light honey yellow. In Massachusetts this species attains a greater size. It resembles *C. cornea* of Europe, which, however, is wider, has the umbones more prominent, and both sides of equal height. *C. similis* is longer, much larger, and more coarsely striate.

Cyclas calyculata.—DRAP.

DESCRIPTION.—Shell rhombic orbicular, higher behind, nearly equilateral, extremely thin and fragile, translucent, with very fine striæ; epidermis shining, bluish horn color, or lemon yellow; beaks swollen, and very prominent, resembling knobs; umbones moderately tumid; discs with a small degree of convexity; posterior and hinge margins nearly straight, making an obtuse angle; anterior and inferior margins rounded; anterior much shorter than the posterior margin; cardinal teeth extremely minute; lateral teeth small, compressed; inner surface colored like the

FRESH WATER AND LAND SHELLS.

ANNULATA.

exterior. Length 0.35 inch, height 0.29 inch, width 0.17 inch.

REMARKS.—This species has been found in a swamp in Middlebury, and in Putt's swamp, on the west side of lake Champlain. It has also been found in Maine. The very young are tumid and elliptic, and of a lemon yellow. Some were found in an embryo state in the early part of July. Its dimensions are, length 0.07 inch, height 0.055 inch, width 0.04 inch. The shell of the parent did not exceed 0.002 inch in thickness. The species is easily distinguished by the prominence of the beaks. There seems to be no ground for separating our shell from the European species, whose name we have prefixed.

Cyclas minor.—MIGHELS AND ADAMS.

DESCRIPTION.—Shell ovate, tumid, inequilateral, oblique, very finely striate; epidermis straw color, shining; beaks prominent, two fifths of the difference from one extremity to the other; umbones and discs tumid; posterior and hinge margins slightly rounded; the other margins much rounded; both cardinal and lateral teeth well developed. Length 0.18 inch, height 0.15 inch, width 0.11 inch.

REMARKS.—This species inhabits swamps and is the least of all the native species of this genus. It differs from *C. dubia*, SAY, in having the beaks less removed from the centre, and the posterior and dorsal margins more rounded.

APPENDIX.

Limnaea expansa.—HALDEMAN.

This species is said by the describer to have been found in Vermont, on the authority of Dr. Gould, who received it from a third person as a Vermont shell.

Auricula bidentata.—SAY.

This species, referred by its describer to the genus *Melampus*, was given to Dr. Gould by some one who professed to have found it in Vermont. As this species has not otherwise been found out of the reach of salt water, we cannot, without better authority, regard it as a native of this state.

Amnicola.

Dr. Gould and Mr. Haldeman have proposed a sub-genus of *Paludina* under this name. It includes of the shells of this state, *Paludina porata* and *P. lustrica*.

Amnicola pallida.—HALD.

On the cover of No. 4 of the Monog. Limniad. Mr. H. has described with this name one of the species just named, but the description is not sufficiently exact to determine to which of them it must be referred. That the shell in question is one

of them is inferred from the fact that Mr. H. received them from the writer of this article.

SECTION II.—INVERTEBRATA.

Annulata, Crustacea, Arachnides, and Insects.

The above are four of the classes into which Cuvier's third great division of the animal kingdom is subdivided. The animals belonging to the first 3 classes, which are found in Vermont, are of very little importance, and only a few of them are generally known. We shall pass over them all with only a few remarks.

Annulata.

These are small, insignificant animals, with elongated bodies, consisting of segments, and having red blood. Some of them are protected by a shelly tube, which they never leave during life, and breathe by means of branchiae at one extremity of the body. These constitute the order Tubicola. Others have their organs and branchiae disposed longitudinally along the body. These last belong to the order dorsibranchiata. Our brooks and ponds furnish several animals belonging to the above orders, but they have not been properly examined. The third order of Annelides are denominated Abranchiatæ, on account of their having no apparent external organs of respiration. The horse leech, *Hirudo sanguisuga* L., which is so common in marshes and muddy places in this state, belongs to this order. It grows to a much larger size than the medicinal leech, *H. medicinalis* L., and is sometimes used for the same purposes; but its teeth are more blunt, and the wound produced by them is said in some cases to be dangerous. A specimen before me, which was taken in Burlington, is a very dark olive green above, and the same color, but a little lighter beneath, with a few small spots of black. When not in motion he lies in an oval form, and is about 3 inches long, and 1½ inch wide, but when moving he stretches himself to the length of 6 or 7 inches. The animal is furnished with a flattened disc at each extremity, fitted for adhering to bodies by what is called suction, and its locomotion is performed by reaching forward its anterior extremity, fixing the disc, and then bringing forward the posterior, which is fixed in like manner, and the anterior again thrust forward. In this manner it ascends the side of a perpendicular pane of glass without difficulty, but when at rest it usually adheres by the whole under surface.

FRESH WATER LOBSTER.

SPIDERS AND INSECTS.

The little animal commonly called the *Hair Snake* also belongs to this order, and to the genus *Gordius*. These are very common in the still waters and mud in all parts of the state. They are usually about the size of a large horsehair, and are from one to 6 or 8 inches in length. In color they vary from pure white to nearly black, and hence we probably have several species. The vulgar notion that they originate from hairs which fall from horses and cattle, and become animated in the water, would seem to be too absurd to need contradiction; and yet, absurd as it is, people are to be found who believe it.

Another, and, indeed, the most common animal belonging to this class in Vermont, is the earth worm, *Lumbricus terrestris*, L., called here the *Angle worm*, on account of the great use made of it for bait in fishing. Its body is cylindrical, of a reddish color, and grows to the length of 5 or 6 inches, with the size of a common goose quill. It is destitute of teeth, eyes, and limbs. It traverses the ground in all directions, and seems to subsist chiefly upon the rich soil, which it swallows. It comes to the surface of the ground during the night, and in wet weather, but descends during the day and in dry weather, so as to be in contact with the moist earth.

Crustacea.

This class embraces the crabs, lobsters, and the like. They usually have a crustaceous covering, which is more or less hard, with articulated limbs, and distinct organs of circulation. They breathe by means of branchiæ, which vary much in form and situation, being in some cases on the abdomen, and in others on the bottom of the feet. The animals of this class are very numerous, but they are confined principally to the ocean, and to tropical climates. The following is the only one found in Vermont, which we shall describe.



THE FRESH WATER LOBSTER,
Astacus Bartonii. Bosc.

DESCRIPTION.—General color greenish brown or dark olive; legs 10, the three anterior ones on each side each terminated by two claws forming a kind of for-

ceps; anterior forceps large, strong, toothed, orange colored at the point and edges and besprinkled with spots formed by indentations. Tail terminated by 5 fan-like plates, forward of which, upon the under side, are two rows, with three in each, of small fringed fins, and still further forward are 4 bony limbs which fold inward towards the abdomen; horns, or feelers, 6, two of which are 3 inches long, the others much shorter. Limbs edged with sparse, downy hairs; body and limbs covered with shell, with numerous articulations. Length of the specimen before me $4\frac{1}{2}$ inches.

This singular little animal is so exact a miniature of the large salt water Lobster that some have supposed it to be the young of that species, or rather a dwarfed variety of it. But it is evidently a distinct species, and though it lives and continues to grow for many years, it very seldom exceeds 4 or 5 inches in length. It is very common in many of the small streams in the western parts of the state. It is sometimes eaten, and by some is esteemed a luxury. It is often called the *Craw Fish*.

Arachnides.

The principal animals in Vermont which belong to this class are the Spiders, of which we have, probably, about 100 species. The Spiders belong to the genus *Aranea* of Linneus. And though usually called insects, they differ very materially from the proper insects in their form and habits, and constitute a very interesting family, but we are neither prepared nor have we room to go into particulars respecting them. Their classification is based to a considerable extent upon the arrangement of their eyes, which are usually eight in number.

Insects.

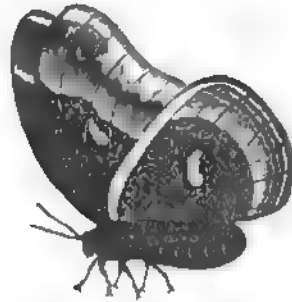
Insects constitute the most numerous division of the animal kingdom. European naturalists have computed that there are on an average 6 insects to one plant. This computation is probably too high for our country, but, estimating only two thirds of that number to a plant, as we have about 1000 plants, it will give us 4000 species of insects. The number of known species of New England insects is now about 3000, of which the greater part are found in Vermont. How many remain to be examined and described is, of course, unknown, but the number is, doubtless, very considerable. The word *Insect* comes from the Latin word *insecta*, and is applied to these small animals on

TRANSFORMATION OF INSECTS.

account of their appearing to be intersected, or divided into sections. Most insects are subject to several changes of form and habit called *metamorphoses*, and in this consists their most remarkable peculiarity. Their existence is made up of four principal stages, viz: the egg, the larva, the chrysalis, and the perfect animal. Directed by instinct, the parent insect is sure to deposit its eggs in the place most favorable for the support of the young, which are in due time to be hatched from them. From these the larvae are at length produced in the form of maggots, worms, or caterpillars. In this state, which is entirely dissimilar to the parent in form and mode of life, they feed voraciously and grow rapidly, often attaining a weight and bulk much greater than that of the perfect insect. At length they cease to feed, become stationary and encased in a shelly covering, which is often surrounded by a cocoon formed of silky fibres. This is what is called the chrysalis or pupa. After remaining for a while in this condition, the shell is burst and thrown off, and the insect emerges in its perfect state, usually provided with wings and often exhibiting the most brilliant and beautiful colors. In this state only is it capable of propagating its species. But it, in general, continues in this state only a short period, just long enough to lay its eggs and die. Most insects feed much more sparingly in their perfect than in their larva state, and some do not feed at all in their perfect state.



The Cocoon, of which the above is a figure, was found on a pine plain in Burlington, upon a small bush, as above represented, in March, 1840. The Cocoon was composed of strong brown silk, and measured 3.5 inches in length and 1.5 in thickness. After being kept about three weeks, or till the 20th of April, in a warm room, a large butterfly, of which the following is a figure, came out of it, by making an opening in the upper end.



This Butterfly measured 1.7 inch in length, and the spread of its wings was just 6 inches. The color of the body belts on the abdomen and portions of the wings was a dark brick-red. General color of the wings different shades of brown beautifully variegated with white, blue, and violet. A roundish black spot, containing a lunated light blue spot near the extremity of each outer wing, &c. This individual was a female, and in the course of the seven days which it lived it laid about 200 eggs.



On the 17th of August, 1840, a caterpillar was picked up in the door-yard, of which the above is a figure. It was 3.5 inches long and 0.75 inch in diameter. Its color was light pea-green. Upon its body were six rows of spines, two on each side, which were blue and pointed, and two on the back, the four anterior ones terminated by balls of the size of small pin-heads, which were red, and covered with small black thorns; all the rest yellow with black points. Being placed under a glass vessel, it immediately commenced spinning, and, before the next day, had completely enveloped itself in a cocoon, precisely similar to the one above described. This remained in a chamber during the winter, and in the spring of 1841, we had from it another butterfly, answering exactly to that figured above.

These details are introduced merely to illustrate the metamorphosis which insects generally experience, and to show the manner in which many of them are preserved through the winter. Others, however, pass the winter in the larva state, in the ground, and still more are preserved in the egg, while some live through the winter in their perfect state.

While much pains have been taken,

LOCUSTBORER.

CUCUMBER-BUG.

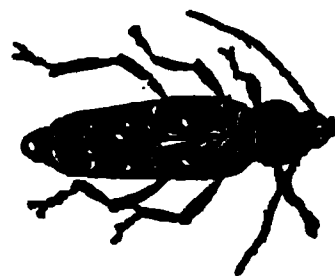
COCK-CHAFFER.

and legislative enactments have been resorted to for the destruction of the larger kinds of noxious animals, insects have for the most part been regarded as too insignificant to deserve notice, while the damage sustained on account of the ravages of insects is probably three times as great, on an average, as that produced by all the vertebral animals together. We have been paying liberal bounties for the destruction of catamounts, wolves, bears, and foxes, while the wheat fly, from which we were sustaining far greater damage than from all those larger animals, has hardly received any attention. We have even paid a bounty for the destruction of crows, while in consequence of that destruction our fields were suffering from the ravages of grubs, which the crows are designed to check. Crows may do some mischief in the spring by pulling up corn, but it is believed to be more than counterbalanced by the good which they do, principally by the destruction of vermin. We are of opinion that all birds, without a single exception, are to be regarded as friends to the farmer and gardener, kindly provided by Providence to prevent the undue multiplication of noxious insects, and we cannot too severely reprobate the barbarous practice in which boys are permitted to indulge, of shooting birds for amusement. It is a practice which should be discountenanced by every friend of his country—by every friend of humanity.

Some insects are most injurious in their perfect state. Of these are the various kinds of bugs, which feed upon vines, &c. But far the greater part do most mischief while in the larva state. Of these are the various kinds of caterpillars, which are the larvæ of butterflies and moths,—the weevil, which is the larva of the wheat fly,—the maggots which cause the fruit to fall off prematurely, and which are the larvæ of curculio and other insects,—the borers, which are the larvæ of beetles, bugs, &c.

The Borer, which at present appears to be doing most injury in this state, is the larva of the *Clitus pictus*, which feeds upon the Locust tree, *Robinia pseudo-acacia*. It commenced its ravages in the southern part of the state, about ten or twelve years ago. It made its appearance at Middlebury, where it destroyed nearly all the locust trees, about 1835. A year or two after this it had proceeded northwardly as far as Vergennes, and in 1840 it had reached Burlington, but did little injury that year. About the first of June, 1841, its operations began to show themselves, and were continued till the beginning of August, in which time ma-

ny of the fine locust trees in this town were entirely spoiled, and others more or less injured. During the month of August they were in the chrysalis state, and consequently inactive. About the first of September they emerged from that state, and during the first half of that month the perfect insects were seen in large numbers, often paired, depositing their eggs upon the locust trees in the crevices of the bark, which were in due time hatched. The same operations have been repeated during the past summer, and now (Sept. 6, 1842,) the insects are busily engaged in depositing their eggs for a new generation. The following is a figure of this insect:



Clitus pictus.

The color of this insect is black, with the wing cases crossed by 5 or 6 irregular bright yellow bars, and there are about the same number of yellow bars upon the abdomen. The color of the legs is reddish umber. Length of the female .8 inch;—the male smaller. The color of the larva, or Borer, is yellowish white.

The Cucumber-Bug, *Galeruca vittata*, is one of our most troublesome insects in gardens. It usually makes its appearance upon cucumber, squash and melon vines early in June, or about the time the leaves begin to expand. Various means have been resorted to for the purpose of preventing its depredations, but from two years' experience we are inclined to believe that sprinkling the plants occasionally with ground plaster of Paris, is the most simple and effectual remedy.

The Cock-chaffer, or May Beetle, *Melolontha quercina*, is often plentiful, and does considerable mischief by the destruction of the first leaves and blossoms upon our fruit trees. During the day they lie concealed, but come forth from their retreats and commit their depredations in the evening. The larva of this beetle is the large white grub, which is so often seen in rich grounds and in turfs. This insect continues four years in the larva, or grub form, and often does extensive damage by eating the roots of grass, corn and other vegetables. At the end of the fourth year it descends deep into the earth, constructs its cocoon from which the beetle is hatched in its perfect form.

PRELIMINARY OBSERVATIONS.

NATIVE FOREST TREES.

the following spring. This is the large beetle which so often enters houses in the evening, attracted by the light within.

Although a large proportion of insects are more or less injurious, there are also others from which man derives very con-

siderable benefit. Among the most valuable of these in this state, may be reckoned the Honey Bee and the Silk Worm, which furnish us with most exquisite articles of food and clothing. But of the great majority of insects scarcely any thing is known either of good or evil.

CHAPTER VII.

BOTANY OF VERMONT.

SECTION I.

Catalogue of Vermont Plants.

By WM. OAKES, of Ipswich, Massachusetts.

Preliminary Observations.

THE State of Vermont, in the richness and beauty of its vegetation, is scarcely equalled by any of the New England States. It owes this, no doubt, to the fertility of its soil, the moisture of its climate, and its situation on the ridges and western borders of the mountains. Its ranges of mountains, stretching the whole length of the State from north to south, intercept and often exhaust the summer clouds and rains, which generally come from the west, so that the destructive droughts, which are so often felt in New Hampshire and the other New England States, are almost unknown in Vermont. The State excels in the number and variety of its Forest Trees, possessing, with the exception of eight, all the known species of New England. The following is the list of

THE NATIVE FOREST TREES OF VERMONT.

Lime Tree, or Bass Wood. *Tilia Americana*.

Wild Black Cherry. *Cerasus serotina*.

Sugar Maple. *Acer saccharinum*.

White Maple. *Acer dasycarpum*.

Red Maple. *Acer rubrum*.

White Ash. *Fraxinus acuminata*.

Red Ash. *Fraxinus pubescens*.

Black Ash. *Fraxinus sambucifolia*.

Sassafras. *Laurus Sassafras*.

Tupelo, or Sour Gum. *Nyssa multiflora*.

Red Mulberry. *Morus rubra*.

Hornbeam. *Carpinus Americana*.

Iron Wood. *Ostrya Virginica*.

White Beech. *Fagus sylvestris*.

Red Beech. *Fagus ferruginea*.

Chestnut. *Castanea vesca*, var. *Americana*.

White Oak. *Quercus alba*.

Swamp White Oak. *Quercus bicolor*.

Overcup White Oak. *Quercus macrocarpa*.

Black Oak. *Quercus tinctoria*.

Red Oak. *Quercus rubra*.

Rock Chestnut Oak. *Quercus montana*.

Scarlet Oak. *Quercus coccinea*.

Large White Birch. *Betula papyracea*.

Small White Birch. *Betula populifolia*.

Black Birch. *Betula lenta*.

Yellow Birch. *Betula excelsa*.

Balsam Poplar. *Populus balsamifera*.

Heart-leaved Balsam Poplar. *Populus canadensis*.

Cotton Poplar. *Populus Canadensis*.

Vermont Poplar. *Populus monilifera*.

Large Aspen. *Populus grandidentata*.

American Aspen. *Populus tremuloides*.

Button Wood. *Platanus occidentalis*.

Common Elm. *Ulmus Americana*.

Slippery Elm. *Ulmus fulva*.

Northern Cork Elm. *Ulmus racemosa*.

Hoop Ash, or Hackberry. *Celtis occidentalis*.

Butternut, or Oilnut. *Juglans cinerea*.

Shellbark Hickory. *Carya squamosa*.

Pignut Hickory. *Carya porcina*.

Bitter Pignut Hickory. *Carya amara*.

White Pine. *Pinus Strobus*.

Red Pine, or Norway Pine. *Pinus resinosa*.

Pitch Pine. *Pinus rigida*.

Double Spruce. *Pinus nigra*.

Single Spruce. *Pinus alba*.

Balsam Fir. *Pinus balsamea*.

Hemlock Spruce. *Pinus Canadensis*.

American Larch, or Hackmatack. *Pinus promula*.

Arbor Vitæ, or "White Cedar." *Thuja occidentalis*.

Red Cedar. *Juniperus Virginiana*.

52 species.

SMALL TREES.

Besides the above, there are several trees of small size.

Striped Maple. *Acer Pennsylvanicum*.

Mountain Maple. *Acer montanum*.

Choke Cherry. *Prunus Virginiana*.

June Berry. *Amelanchier Canadensis*.

Mountain Ash. *Sorbus Americana*.

Wild Yellow Plum, or "Canada Plum." *Prunus Americana*.

And also many large shrubs, which sometimes become small trees.

The Stag's Horn Sumac. *Rhus typhina*.

The Poison Sumac, or Dogwood. *Rhus venenata*.

The Hawthorns. *Crataegus coccinea*, &c.

The Witch Hazel. *Hamamelis Virginiana*.

The High Laurel. *Kalmia latifolia*.

Several species of Willow and Alder.

Several species of *Cornus*, *Viburnum*, &c.

The Forest Trees of New England not found in Vermont are,

The Tulip Tree. *Liriodendron Tulipifera*.

Sweet Gum. *Liquidambar Styraciflua*.

Black Walnut. *Juglans nigra*.

White Hickory, *Carya alba*.

White Cedar of Middle States. *Cupressus thyoides*.

Chestnut Oak. *Quercus Castanea*.

Post Oak. *Quercus obtusiloba*.

Cotton Tree. *Populus heterophylla*.

There are three species found in Vermont, and not elsewhere in N. England.

The Overcup White Oak. *Quercus macrocarpa*.

The Northern Cork Elm. *Ulmus racemosa*.

The Heart-leaved Balsam Poplar. *Populus candicans*.

The Overcup White Oak belongs to the states of the West, and has not been found even in New York. It was found in 1829, by Dr. Robbins, in many towns on the western border of the state from St. Albans to Bennington. It is distinguished by the great size of the acorn, and the fringed border of the cup.

The Northern Cork Bark Elm was first found in the state of New York, and was described by Mr. Thomas, in Silliman's Journal, in the same year (1829) that it was found by Dr. Robbins in Bennington and Pownal. It is easily distinguished from the other New England species by the broad plates of cork on its branches.

Three fine species of Poplar, the two Balsam Poplars, and the magnificent Vermont Poplar, *Populus monilifera*, are scarcely found unless cultivated, in any other of the New England states. Neither of these three Poplars, nor the Cotton Poplar, have been found native in New York by the Botanists of that State, according to the late Report and Catalogue of Dr.

Torrey. (According to the younger Michaux, the Cotton Poplar is found native in the west of New York.)

The Vermont Poplar, and the Heart-leaved Balsam Poplar, which Dr. Robbins found wild in many parts of Vermont, were not seen native in North America by either the elder or younger Michaux, and do not appear to have been previously seen in a wild state by any Botanist in the United States.

List of VERMONT PLANTS not found in any other New England state.

Anemone Pennsylvanica,

" *Hudsoniana*,

Corydalis aurea,

Nasturtium natans,

Sisymbrium teres,

Draba arabisans,

Sinapis arvensis. Introduced.

Cerastium nutans,

Flörkea proserpinacoides,

Ceanothus ovalis,

Lathyrus ochroleucus,

Phaca Robbinsii,

Zizia integerrima,

Symphoricarpus racemosus,

Viburnum pubescens,

Valeriana sylvatica,

Aster ptarmicoides,

Solidago humilis,

Pterospora andromedea,

Justicia Americana,

Shepherdia Canadensis,

Euphorbia platyphylla,

Quercus macrocarpa,

Populus candicans,

" *monilifera*,

Ulmus racemosa,

Listera convallarioides,

Calypso bulbosa,

Trillium grandiflorum,

Zannichellia palustris,

Carex eburnea,

Equisetum variegatum,

Aspidium aculeatum,

Pteris gracilis.

Besides the species in the above list, many of which are among the rarest and most interesting plants of the U. S. there, are a great number of species common in the west of Vermont, and of Massachusetts and Connecticut, which are entirely unknown in the eastern parts of New England. Among these we may mention the Ginseng, the Golden *Corydalis*, the curious and beautiful species of *Dielytra*, and the Spring Beauty, *Claytonia Caroli-*

Of the four beautiful species of *Lady's* most delicate and brilliant blossoms, ground in the woods with its cheerful and niana, which in early spring spangles the

NUMBER OF PLANTS.

WESTERN PART OF VERMONT.

Slipper, only two, *Cypripedium acaule* and *erectum*, are found in the eastern part of New England.

Four species of *Trillium* are also found in Vermont, of which one, the magnificent *Great flowered Trillium*, is found nowhere else in New England. In the eastern part of Massachusetts, no species is found except *Trillium cernuum*.

Vermont is peculiarly rich in Orchidæ. The rare and beautiful *Calypso* has been found no where else in the United States, and *Listera convallarioides* in no other New England state. All the species of New England are found in Vermont, except two, *Tipularia discolor* and *Orchis rotundifolia*.

Of the beautiful order of Ferns, Vermont contains two species not found elsewhere in New England, *Pteris gracilis* and *Aspidium aculeatum*, and several fine species which are wanting or rare in the east of New England, are common in Vermont. It has all the species of New England except *Lygodium palmatum* and *Woodwardia onocleoides*.

On the other hand Vermont is wanting in a great number of plants common in the south and east of New England. Of course it is destitute of all the species peculiar to the sea shore, and of all the numerous and beautiful "Weeds" of the Sea. The elegant *Tulip Tree*, common in the southwest of New England, the splendid *Rosebay*, and the fragrant *Magnolia*, are not found in Vermont. In the whole there are more than 500 New England species which it does not possess, of which we will only mention *Berberis vulgaris*, *Silene Pennsylvanica*, *Tephrosia Virginiana*, *Rhexia Virginica*, *Liatris scariosa*, *Clethra alnifolia*, *Euchroma coccinea*, *Anagallis arvensis*, *Hypoxis erecta*, *Aletris farinosa*, *Lilium superbum*, *Poa Eragrostis*, and *Baptisia tinctoria*.

The number of known phænogamous plants of New England, with the addition of the Ferns, is nearly or quite 1500, excluding a great number of nominal species generally admitted. The number of plants of Vermont of the same Orders, in the present catalogue, is 929. The whole number of species of the same orders existing within the limits of the state, is doubtless as many as 1100 or 1200, so that there is still a very ample field for the discovery of additional species. Many species, indeed, exist on the very borders of Vermont, in New Hampshire and Massachusetts, which we have no authority for inserting as natives of the state, and have not admitted into the catalogue, although we have no doubt that they are also Vermont plants.

We must not forget to mention that the vegetation of the eastern part of Vermont is greatly inferior in beauty and variety to that of the western border. The pines and firs prevail more at the east, and the species of forest trees are not so numerous. While the west has nearly every plant of the east, the east is destitute of a vast number of those of the west. Among the species of Vermont plants wanting at the east, we may mention the *Vermont Poplar*, both the *Balsam Poplars*, the *Cotton Poplar*, the *Northern Cork Elm*, the *Overcup White Oak*, *Viola Canadensis* and *rostrata*, *Dielytra Canadensis*, *Uvularia grandiflora*, *Asplenium angustifolium*, *rhizophyllum*, and *Ruta muraria*, &c., besides others to be immediately noticed.

The western ridge of the Alleghany mountains, which at the head of lake Champlain ceases to exist, is broken and interrupted in the state of New York opposite the southwestern border of Vermont, and thus an indirect and difficult entrance is opened to some of the plants of the west and northwest. The western border of Vermont thus appears to become the eastern limit of a considerable number of plants, of which the following is a pretty complete list.

Anemone Pennsylvanica,
Corydalis aurea,
Symphoricarpus racemosus,
Justicia Americana,
Flœrkea proserpinacoides,
Ceanothus ovalis,
Nasturtium natans,
Viburnum pubescens,
Zannichellia palustris,
Carex eburnea,
Lathyrus ochroleucus,
Ulmus racemosa,
Quercus macrocarpa,
Aster ptarmicoides,
Pterospora andromedea,
Pteris gracilis,
Zizia integerrima,
Lonicera hirsuta,
Polanisia graveolens,
Trillium grandiflorum.*

Many of the above species, though not found more eastwardly in the United States, may possibly extend farther to the east along the banks of the St. Lawrence.

The summits of Mansfield and Camel's Hump Mountains, the highest mountains in the state, have been pretty thoroughly examined by Dr. Robbins, Mr. Tuckerman, and Mr. Macrae. These mountains, though destitute of trees at their very summits, from the violence of the winds

* Found in New Brunswick, according to Hooker.

MATERIALS FOR THE CATALOGUE.

AUTHORITIES.

which sweep over them, do not probably quite reach the true limits of trees, and possess only a few of the alpine plants of the White Mountains, which are about 80 miles distant to the eastward.* The only truly alpine species found on these mountains are, perhaps, *Juncus trifidus*, and *Hierochloa alpina*. Other species, almost alpine, are *Poa alpina*, *Empetrum nigrum*, *Salix Uva-ursi*, *Bartsia pallida*, *Lycopodium Selago*, &c.

The materials upon which the present Catalogue is founded, are the following.

The Catalogue of the plants of Middlebury, published in 1821 in Professor Hall's "Statistical Account of the town of Middlebury," and which was subsequently republished in the first edition of the present work, with the addition of the common cultivated plants, and about 30 indigenous and naturalized species, some of which were probably collected in other parts of the state, making in the whole 569 indigenous and naturalized species. The author of this Catalogue was Dr. EDWIN JAMES, the well known botanist in Long's Expedition to the Rocky Mountains. It was probably made almost entirely from his own collections, and though literally a mere list of names, it bears the marks every where of the great accuracy and research of its author, then a young botanist. It is still the only authority for several rare species.

The collections made by JAMES W. ROBBINS, M.D., of Uxbridge, Mass., who in the year 1829 examined with the greatest care and success the whole western border of Vermont, from Massachusetts to Canada. Dr. Robbins entered the state at Pownal, on the 20th of May, and passing slowly along the western border to the Canada line, examined the large islands of lake Champlain, and afterwards visited Camel's Hump Mountain, leaving the state at Windsor on the 10th of June. On the 20th of July he again entered the state at Guildhall, and after examining the southern border of lake Memphremagog, and the towns in that vicinity, he visited Mansfield Mountain. From thence he proceeded to Burlington and Colchester, where he first discovered the remarkable botanical region at High Bridge and Winooski falls, so rich in rare and interesting plants, and after examining the shores of the lake and the islands of South and North Hero, he visited the mouth of Otter Creek, and, proceeding along the western range of towns from Shoreham to Pownal, left the state at Brattleboro' on the 23d of August. Dr. Robbins found

and collected a vast number of rare and interesting species, a large part of which were additions to the Flora of New England, and many of them were also new to the United States.

The collections of JOHN CAREY, Esq., of the city of New York, well known to Botanists by his contributions to the Flora of Torrey and Gray, who resided at Bellows Falls during the five years preceding 1836, and who also made frequent visits to the northeastern counties of the state. Though Mr. Carey's examinations were principally confined to the eastern part of the state, which is very inferior as a botanizing region to the western border, yet he collected very many rare and interesting plants, among which we may mention *Calypso bulbosa*, *Listera convallarioides*, and *Equisetum variegatum*. Mr. Carey has also added to the catalogue a large number of common species, especially Grasses and Cyperaceæ.

The collections of W. F. MACRAE, Esq. of Montreal, Canada, who, while resident at Burlington a few years ago, as a student in the University of Vermont, examined with great zeal the Botany of that vicinity, and besides the more common plants of that region, collected many rare and interesting species, among which were *Pteris gracilis*, and *Draba arabisans*, the first new to New England, the last collected there only by Michaux. Mr. Macrae also, in 1839, in company with EDWARD TUCKERMAN, Jr., Esq., the author of several valuable papers on the Lichens of New England, visited Camel's Hump and Mansfield mountains, where, besides other rare species, they collected, on the sides of Mansfield, *Aspidium aculeatum*, found in the United States only by Pursh, and by him in the same region. Mr. Tuckerman has also communicated other species collected by him in various parts of Vermont.

Several very interesting species were added to the Flora of Vermont by the late J. CHANDLER, M. D., of Bennington, Vt., who also accompanied Dr. Robbins during a part of his first tour, and several are given on the authority of ISAAC BRANCH, M. D., of Abbeville District, S. C., JEREMIAH BURGE, M. D., of Drews-ville, N. H., M. M. REED, M. D. of Jacksonville, Ill., and P. T. WASHBURN, Esq. of Ludlow, Vt.

All the rarer species collected by Dr. Robbins, and many of the common ones, are ascertained from specimens received from him—the remainder rest on the authority of his journals in my possession, which were made daily during his tour. From his thorough acquaintance with the

* Height of Mansfield mountain 4,279 feet, and of Camel's Hump 4,183 feet, above tide water.

CATALOGUE OF PLANTS.

plants of New England, and our mutual knowledge of each other's species, derived from long intercourse and interchange of specimens, I believe that very few if any mistakes have occurred as to the species received from him.

I have received specimens from Dr. Chandler of all the plants given on his authority, and Dr. Robbins saw and examined the species derived from Drs. Branch, Burge, and Reed, in the herbaria of those gentlemen.

I have also seen specimens from Mr. Macrae, of nearly all the species given on his authority.

I have seen only a few specimens from Mr. Carey, but have not hesitated to depend on his known accuracy, and intimate intercourse with Drs. Torrey and Gray.

In preparing the Catalogue, I have generally followed, especially as to the nomenclature of the species, the truly excellent North American Flora of Torrey and Gray, now published as far as Vol. 2, No. 2, which corresponds with the first part of the Catalogue as far as the genus *Bidens*, inclusive. As to the remaining part, I have preferred such names and synonyms as are most certain and familiar to American Botanists, not always following my own opinions, as such a catalogue affords no room for their explanation and support. Owing to the excellent materials at my disposal, the Catalogue is doubtless as complete as that of any state of the Union yet published, and I hope that it will be found useful and acceptable to Botanists.

CATALOGUE OF PLANTS.

[The sign § is prefixed to such species as have been introduced and naturalized.]

CLASS I. EXOGENS, OR MONOCOTYLEDONOUS PLANTS.

ORDER RANUNCULACEÆ. *The Crowfoot Tribe.*

Clematis, Linn. *Virgin's Bower.*

Virginiana, L. Borders of thickets &c., in moist soil. Aug.

verticillaris, DC. Shady ledges. Rather rare. May, June.

Anemone, Haller. *Wind Flower.*

nemorosa, L. Woods, &c. May.

Virginiana, L. On dry rocky hills, &c. June, July.

var. alba. Castleton, Branch, Robbins. Colchester, Burlington, &c. Robbins.

By an accidental transposition, placed under *A. cylindrica*, in Hovey's Mag. Vol. 7, p. 18.

cylindrica, Gray. Dry hills, &c. Bellows Falls, Carey Burlington, Macrae. July.

Hudsoniana, Richardson. Torrey & Gray, Vol. Suppl. p. 658. *A. multifida*.

var. Hudsoniana, DC. T. & G. I. p. 13. On the limestone ledges of the Winooski river, at Winooski falls, Colchester, and below High Bridge, Burlington, Robbins. May, June.

Pennsylvanica, L. In stony places occasionally overflowed, on the banks of lake Champlain. Westhaven, South Hero, &c., Robbins. At Mallet's Bay, Sharpshin Point, and Winooski falls, Burlington, Macrae. June, July.

Hepatica, Dillen. *Noble Liverwort.*

triloba, Chaix. *Anemone Hepatica*, L. Woods. April.

Ranunculus, L. *Crowfoot.*

aquatilis, L. *var. capillaceus*, DC. Small streams. June—Sept.

repens, L. *var. filiformis*, DC. Overflowed borders of rivers and lakes. July, Aug.

abortivus, L. Shady banks, &c. May, June.

scleratus, L. Ditches, &c. July, Aug.

acris, L. *Buttercups.* Meadows, &c. June—Aug.

bulbosus, L. *Buttercups.* Pastures on hills, &c. May, June.

repens, L. Low moist grounds. June—Aug.

Pennsylvanicus, L. Low moist grounds. July, Aug.

recurvatus, Poir. Shady moist banks. June.

Parishii, Richardson. *R. multifidus*, Parish. Ponds and lakes. Castleton, Chandler. South Hero, Alburgh, Colchester, &c., Robbins. Middlebury, Burge. May, June.

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Caltha, L. *Meadow Cowslip. Marsh Marigold.*

palustris, L. Wet meadows and swamps. May, June.

Coptis, Salisbury. *Gold Thread.*

trifolia, Salisb. Woods, in boggy soil. May.

Aquilegia, Tourn. *Columbine.*

Canadensis, L. Rocky places. May, June.

Actaea, L.

alba, Bigelow. *White Cohosh.* Rocky woods. May.

rubra, Bigelow. *Red Cohosh.* Rocky woods. May.

Cimicifuga, L.

racemosa, Elliott. *Actæa racemosa*, L. *Black Snakeroot.* Woods. Middlebury, James. Mansfield mountain, Shelburne and Sharpshin Points near Burlington—rare.—*Macrae.*

Thalictrum, Tourn. *Meadow Rue.*

dioicum, L. Shady rocky banks. May.

Cornuti, L. Moist grounds. July.

ORDER MENISPERMACEÆ. *The Moonseed Tribe.*

Menispermum, Tourn. *Moonseed.*

Canadense, L. Woods, &c. Middlebury, James. St. Albans and South Hero, Robbins. Burlington, Carey. Vergennes, *Macrae.* June, July.

ORDER BERBERIDACEÆ. *The Barberry Tribe.*

Leontice, L.

thalictroides, L. *Blue Cohosh.* Woods. May.

Podophyllum, L. *May Apple.*

peltatum, L. Woods in rich soil. Castleton, Branch. May.

ORDER CABOMBACEÆ.

Brasenia, Schreber.

purpurea. *Hydropeltis purpurea*, Michx. *Brasenia peltata*, Pursh. In water. In Minaud's pond, Rockingham, Carey. In Colchester pond, *Macrae.* July.

ORDER CERATOPHYLLACEÆ.

Ceratophyllum, L. *Hornwort.*

echinatum? Gray. In ponds and rivers. Near the mouth of Winooski river, and in lake Memphremagog, Robbins.

ORDER NYMPHÆACEÆ. *The Water-Lily Tribe.*

Nymphaea, Tournefort.

odorata, Aiton. *White Water-Lily.* Ponds and rivers. July, Aug.

Nuphar, Smith.

advena, Aiton. *Yellow Water-Lily.* Ponds and rivers. June, July.

lutea. var. *Kalmiana*, Torr. & Gr. *N. Kalmiana*, Pursh. Ponds and rivers. July.

ORDER SARRACENIACEÆ.

Sarracenia, Tourn.

purpurea, L. *Side-saddle Flower. Forefather's Cup.* Sphagnous bogs. June.

ORDER PAPAVERACEÆ. *The Poppy Tribe.*

Sanguinaria, Dillenius. *Blood-root.*

Canadensis, L. Woods, &c. May.

Chelidonium, Tourn.

**§ majus*, L. Road-sides, and about houses. June—Sept.

ORDER FUMARIACEÆ. *The Fumitory Tribe.*

Dielytra, Borckh.

cucullaria, DC. Woods, &c. May.

Canadensis, DC. *Squirrel Corn.* Woods. St. Albans, Robbins. In the southwest of Vermont, Oakes. May.

Adlumia, Raf.

fungosa. *Corydalis fungosa*, Ventenat. *Adlumia cirrhosa*, Raf. Rocky woods. Middlebury, James, Burge. Castleton, Burlington, and Westhaven, Robbins. Ludlow, Washburn. July—Sept.

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Corydalis, DC.

aurea, Willd. Rocky woods. Castleton, Chandler. Burlington, Macrae. May, June.

glauca, Pursh. Rocks and ledges. May, June.

ORDER CRUCIFERÆ. *The Cruciferous Tribe.***Nasturtium, R. Br.**

palustre, DC. Wet places. July, Aug.

natans, DC. var. *Americanum*, Gray, T. & G. I. p. 75. In shallow water on the borders of Otter Creek below Vergennes, abundant for several miles, Robbins. July, Aug.

Barbarea, R. Br.

vulgaris, R. Br. Winter Cress. Road-sides, &c., generally in moist soil. June.

Arabis, L. Wall Cress.

hirsuta, Scop. *A. sagittata*, DC. *Turritis hirsuta*, L. Rocks. June.

laevigata, DC. *Turritis laevigata*, Muhl. Rocks. June.

Cardamine, L.

rhomboidea, DC. *C. rotundifolia* var., Tor. & Gray. Wet meadows. Castleton, Robbins. May, June.

hirsuta, L. *C. Pennsylvanica*, Muhl. Brooks &c. June, July.

pratensis, L. Lady's Smock. Cuckoo Flower. Wet meadows. Whiting and Alburgh, Chandler. St. Albans, Robbins. May, June.

Dentaria, L. Toothwort.

diphylla, Michx. Pepper Root. Woods. May.

laciniata, Muhl. Woods. Castleton, Robbins. May.

Sisymbrium, Alkioni.

§ *officinale*, Scop. Hedge Mustard. Road-sides and about houses. June—Aug.

teres, Torr. & Gray, I. p. 93. *Cardamine teres*, Michx. Vermont, on Lake Champlain, Michaux. No botanist except Michaux has ever collected this species.

Sinapis, L. Mustard.

§ *nigra*, L. Black Mustard. Old fields, &c. June—Aug.

§ *arvensis*, L. Road sides, old fields, &c., called "Charlock," which it resembles. Charlotte and Alburgh, Robbins. About Burlington, Macrae. May, June.

Draba, L.

arabizans, Michx. On rocks. On Lake Champlain, Michaux. At Sharpshin Point, Burlington, and on the north side of Juniper Island, Macrae. May.

Cochlearia, L.

§ *A Armoracia*, L. Horse-radish. Banks of rivers, and about houses, in moist soil. June. This well known species is also thoroughly naturalized in Massachusetts, often in places distant from habitations.

Camelina, Crantz.

§ *sativa*, Crantz. Old fields, flax fields, &c. Ferrisburgh, Robbins. Bellows Falls, Carey.

Lepidium, L. Pepperwort, or "Pepper Grass."

Virginicum, L. Sandy fields and roadsides. June, July.

Capsella, Vent. Shepherd's Purse,

§ *Bursa-pastoris*, Moench. Gardens and fields. April—Sept.

Raphanus, L.

§ *Raphanistrum*, L. Charlock. Wild Radish. Cultivated grounds. South Hero, Robbins. June, Sept.

ORDER CAPPARIDACEÆ. *The Caper Tribe.***Polanisia, Raf.**

graveolens, Raf. On the gravelly banks of Lake Champlain, above high water. July, Aug.

ORDER POLYGALACEÆ. *The Milkwort Tribe.***Polygala, L. Milkwort.**

verticillata, L. Dry Soils. At Bellows Falls, Tuckerman, Carey. July—Sept.

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- Senega*, L. *Seneca Snake-root*. Dry rocky woods and banks. June.
polygama, Wait. *P. rubella*, Willd. Dry fields and borders of woods. July, Aug.
paucifolia, Willd. Pine woods and sphagnous swamps. May, June.
ambigua, Nuttall. Dry fields, &c. Pownal, Robbins. July, Aug.

ORDER VIOLACEÆ. *The Violet Tribe.*

- Viola*, L. *Violet*.
palmeta, L. Woods and shady banks. Pownal, Robbins. May.
cucullata, Ait. Wet meadows and woods. May.
sagittata, Ait. var. *ovata*, T. & G. I. p. 138. *V. ovata*, Nutt. Dry hills, &c. May.
rotundifolia, Michx. Woods. May.
blanda, Willd. Wet meadows and woods. May.
Muhlenbergii, Torrey. Moist woods. May, June.
rostrata, Pursh. Woods. May, June.
pubescens, Ait. Woods. May, June.
Canadensis, L. Woods. May, June.

ORDER DROSERACEÆ. *The Sundew Tribe.*

- Drosera*, L. *Sundew*.
rotundifolia, L. Sphagnous bogs. June—Aug.
longifolia, L. Sphagnous bogs. June—Aug.
Parnassia, Tourn. *Grass of Parnassus*.
Caroliniana, Michx. Wet meadows, &c. Aug., Sept.

ORDER CISTACEÆ. *The Rock-rose Tribe.*

- Helianthemum*, Tourn.
Canadense, Michx. Dry sandy pastures, &c. Pownal, Robbins. Bellows Falls, Carey. Burlington, Macrae. June.
Lechea, L. *Pin Weed*.
major, Michx. Dry pastures, &c. Middlebury, James. July, Aug.
minor, Lam. Dry hills, &c. Middlebury, James. Burlington, Macrae. Bellows Falls, Carey. July, Aug.

ORDER HYPERICACEÆ. *The St. John's Wort Tribe.*

- Hypericum*, L. *St. John's Wort*.
pyramidatum, Ait. *H. ascyroides*, Willd. Banks of rivers. Burlington, Bigelow. Near Rutland, Robbins. On Black river, Springfield, Carey. On White river, between Royalton and Hartford, Oakes. July, Aug.
§ perforatum, L. *Common St. John's Wort*. Grass fields, pastures, &c. July, August.
corymbosum, Muhl. Shady banks, &c. July, Aug.
ellipticum, Hooker. Moist meadows, &c. Middlebury, Burge. Westford and Ferrisburgh, Robbins. Burlington, Tuckerman. Bellows Falls, &c., Carey. July, Aug.
mutilum, L. *H. parviflorum*, Willd. Wet soils. July, Aug.
Canadense, L. Wet soils. July, Aug.
Elodea, Adans.
Virginica, Nutt. Swamps, &c. Middlebury, James. Burlington, Macrae. July Aug.

ORDER ILLECEBRACEÆ. *The Knot-grass Tribe.*

- Spergula*, Bartl.
§ arvensis, L. Old fields, &c. June, Oct.
Anychia, Michx.
dichotoma, Michx. Dry hills, &c. Pownal, Robbins. July, Aug.

ORDER CARYOPHYLLACEÆ. *The Pink Tribe.*

- Mollugo*, L.
verticillata, L. Sandy soils. Bellows Falls, Carey. July—Sept.
Arenaria, L. *Sandwort*.
stricta, Michx. Rocks. June.

CATALOGUE OF PLANTS.

Granlandica, Spring. *A. glabra*, Bigel. non Michx. On the summits of Mansfield mountain and Camel's Hump, *Robbins*, *Tuckerman*, and *Macrae*. July, Aug. (Identical with *A. glabra* of Michaux, *Macrae*.)

§ *Serpyllifolia*, L. Sandy fields. Burlington, *Tuckerman*. May—July.

lateriflora, L. Moist woods. Middlebury, *Burge*. Fairhaven, *Robbins*. June.

Stellaria, L.

§ *media*, Smith. *Chickweed*. Gardens, &c. April—Nov.

longifolia, Muhl. Bellows Falls, *Carey*. June.

borealis, Bigel. Swamps, and on mountains. June, July.

Cerastium, L. *Mouse-ear Chickweed*.

§ *vulgatum*, L. Roadsides, &c. June.

nutans, Raf. Moist shady places. Middlebury, *Burge*. Danby and Rutland, *Robbins*. May.

Silene, L. *Catchfly*.

antirrhina, L. Dry fields, &c. On the rocks about Winooski falls, Colchester. *Robbins*. Bellows Falls, *Carey*. June.

§ *nectiflora*, L. Old fields, &c. Bellows Falls, *Carey*. Burlington, *Macrae*. July.

Agrostemma, L.

Githago, L. *Corn Cockle*. Cultivated fields, &c. June.

ORDER PORTULACACEÆ. *The Purslane Tribe.*

Portulaca, L.

oleracea, L. *Purslane*. Gardens, &c. July, Aug.

Claytonia, L.

Caroliniana, Michx. *Spring Beauty*. Woods. April, May.

ORDER LINACEÆ. *The Flax Tribe.*

Linum, L. *Flax*.

§ *usitatissimum*, L. *Common Flax*. Old fields, &c. July.

Virginianum, L. Dry woods, &c. Pownal, *Robbins*. June—Aug.

ORDER GERANIACEÆ. *The Geranium Tribe.*

Geranium, L.

maculatum, L. Woods. June.

Carolinianum, L. Dry soils. Bellows Falls, *Carey*. Burlington, *Oakes*. June.

Robertianum, L. Shady ledges, &c. June—Sept.

§ *dissectum*, L. Hills. Castleton, *Robbins*. June, July. Exactly the European plant, and found also by Dr. Robbins at Augusta, Me., and Uxbridge, Mass.

ORDER BALSAMINACEÆ. *The Balsam Tribe.*

Impatiens, L. *Balsam*.

pallida, Nutt. Moist shady grounds. Pownal, *Oakes*. At the base of Mansfield mountain, Westhaven, Jericho, &c., *Robbins*. Guildhall, *Carey*.

fulva, Nutt. Moist grounds. Aug. Sept.

ORDER LIMNANTHACEÆ.

Flörkea, Willd.

proserpinacoides, Willd. Wet banks, and margins of streams, &c. Castleton, *Robbins*. May.

ORDER OXALIDACEÆ. *The Wood-sorrel Tribe.*

Oxalis, L. *Wood-sorrel*.

acetosella, L. Mountain woods. June, July.

stricta, L. Cultivated grounds. June—Sept.

ORDER XANTHOXYLACEÆ.

Xanthoxylum, L.

Americanum, Miller. *X. traxineum*, Willd. *Prickly Ash*. On rocky hills and banks. Middlebury, *James*. Ferrisburgh, Shoreham, Grand Isle, Shelburne, St. Albans, and Arlington, *Robbins*. April, May.

CATALOGUE OF PLANTS.

ORDER ANACARDIACEÆ. *The Cashew Tribe.**Rhus*, L. *Sumac.**typhina*, L. *Stag's horn Sumac.* Hills. June.*glabra*, L. *Smooth Sumac.* Hills, &c. July.*copallina*, L. *Mountain Sumac.* Hills and pastures. July.*venenata*, DC. *R. vernix*, L. in part. *Poison Sumac.* *Poison Dogwood.*—
Swamps. June.*Toxicodendron*, L. *Poison Ivy.* Woods and along fences. June.*aromatica*, Ait. Dry hills and banks. Shoreham, Dr. Hill. Westhaven and
Pownal, Robbins. May.ORDER MALVACEÆ. *The Mallow Tribe.**Malva*, L. *Mallows.*§ *rotundifolia*, L. Road-sides and about houses. June—Sept.*Sida*, L.*Abutilon*, L. Waste places, cultivated grounds, &c. Pownal, Robbins. Aug.,
Sept.ORDER TILIACEÆ. *The Linden Tribe.**Tilia*, L. *Linden, or Lime Tree.**Americana*, L. *Bass Wood.* Woods. July.ORDER VITACEÆ. *The Vine Tribe.**Vitis*, L. *Vine.**Labrusca*, L. *Fox Grape.* Woods and thickets. June.*estivalis*? Michx. *Summer Grape.* Banks of rivers, &c. On the alluvial
banks of the Winooski, near High Bridge, Colchester,
Robbins. Rocks at Sharpshin Point, Burlington, Macrae.
Bellows Falls, Carey. June.*riparia*, Michx. Thickets on the banks of rivers. Bellows Falls, Carey. June.*cordifolia*, Michx. *Frost Grape.* *Winter Grape.* Borders of thickets, &c. June.*Ampelopsis*, Michx.*quinquefolia*, Michx. *Common Creeper.* Woods, &c. July.ORDER ACERACEÆ. *The Maple Tribe.**Acer*, L. *Maple.**Pennsylvanicum*, L. *A. striatum*, Michx. *Striped Maple.* Woods. May, June.*spicatum*, Lam. *A. montanum*, Ait. *Mountain Maple.* Woods. June.*saccharinum*, L. *Sugar Maple.* Woods. May. var. *nigrum*. *A. nigrum*,
Michx. *Black Sugar Maple.* Woods. May.*dasycarpum*, Ehrh. *White Maple, Soft Maple.* Banks of rivers. April.*rubrum*, L. *Red Maple.* Swamps, &c. April, May.

ORDER CELASTRACEÆ.

Staphylea, L. *Bladder-nut.**trifolia*, L. Rocky banks, &c. Middlebury, James. Pownal, Robbins. May.*Celastrus*, L.*scandens*, L. *Wax-work. False Bitter-Sweet.* Borders of woods, fences, &c.
June.ORDER RHAMNACEÆ. *The Buck-Thorn Tribe.**Rhamnus*, L. *Buck-thorn.**alnifolius*, L'Her. Sphagnous swamps. Castleton, Whiting, Craftsbury, &c.,
Robbins. Hubbardton, Chandler. Danville, Carey. May,
June.*Ceanothus*, L.*Americanus*, L. *New Jersey Tea.* Dry woods, pastures, &c. July*ovalis*, Bigel. Dry open sandy woods, &c. Burlington, June.ORDER LEGUMINOSÆ. *The Pea and Bean Tribe.**Vicia*, L. *Vetch.**sativa*, L. *Common Vetch.* Tare. Old fields, &c. July.*Cracca*, L. Old fields, &c. Middlebury, Burge. June, July.

CATALOGUE OF PLANTS.

Lathyrus, L.

maritimus, Bigel. *Pisum maritimum*, L. *Shore Pea*. On the sandy shore of lake Champlain, Burlington, *Macrae*. June, July.

palustris, L. Wet meadows, &c. June.

var. *myrtifolius*, L. *myrtifolius*, Muhl. "In Vermont. *Torrey & Gray*."

ochroleucus, Hooker. *L. glaucifolius*, Beck. On the banks of lake Champlain, in dry soil, in North and South Hero, *Robbins*. June, July.

Apios, Boerhaave.

tuberosa, Mœnch. *Glycine Apios*, L. *Ground Nut*. Moist shady places. Aug.

Amphicarpæa, Elliott.

monoica, Elliott. *Glycine monoica*, L. Woods. July.

Trifolium, L. Clover. Trefoil.

§ *arvense*, L. Dry sandy soil. July, Aug.

§ *pratense*, L. *Red Clover*. Meadows, fields, &c. June—Sept.

repens, L. *White Clover*. Meadows, fields, woods, &c. May—Oct.

Melilotus, Tourn. Melilot.

officinalis, Willd. *Yellow Melilot*. Middlebury, *James*. June—Aug.

Medicago, L.

§ *lupulina*, L. *Nonesuch*. Fields, &c. South Hero. *Robbins*. June, Aug.

Phaca, L.

Robinsii, Oakes, in Hovey's Mag., May, 1841. On a limestone ledge in Burlington, on the banks of Winooski river, a quarter of a mile below High Bridge, *Robbins*. May, June.

Desmodium, DC. Hedysarum, L.

nudiflorum, DC. Dry woods. Aug.

acuminatum, DC. Dry woods. Aug.

Canadense, DC. Woods and by fences. July, Aug.

canescens, DC. Dry soil. Pownal, *Robbins*. Aug.

paniculatum, DC. Dry woods. Ferrisburgh, *Robbins*. Aug.

Dillenii, Darlington. Dry woods. Bellows Falls, *Carey*. Aug.

Lespedeza, Michx. Hedysarum, L.

violacea, Pers. Dry woods. Rockingham, *Carey*. Aug.

hirta, Ell. Dry fields, banks, &c. Colchester, *Robbins*. Aug.

capitata, Michx. Dry pastures, &c. Bellows Falls, *Carey*. August.

Lupinus, L. Lupine.

perennis, L. *Wild Lupine*. Sandy woods and fields. June.

Cassia, L.

Marilandica L. *Wild Senna*. Orwell, Dr. Hill. Bellows Falls, *Carey*. Aug.

ORDER ROSACEÆ. The Rose Tribe.

Prunus, Tourn. Plum.

Americana, Marshall. *P. nigra*, Ait. *Canada Plum*. *Wild Yellow Plum*.—Woods. May.

Cerasus, Juss. Prunus, L. Cherry.

pumila, Michx. *Sand Cherry*. Rocky or sandy shores. May.

Pennsylvanica, Loisel. *C. borealis*, Michx. *Wild Red Cherry*. Woods. May.

serotina, DC. *C. Virginiana*, Michx. *Wild Black Cherry*. Fields, woods, &c. June.

Virginiana, DC. *P. obovata*, Bigel. *Choke Cherry*. Fields, woods, &c. June.

Spiræa, L.

salicifolia, L. *Meadow Sweet*. Low grounds. July, Aug.

tomentosa, L. *Hardhack*. Low grounds. July, Aug.

Geum, L. Avens.

strictum, Ait. Low grounds. July.

Virginianum, L. Fields, &c. June, July.

rivale, L. *Water Avens*. Bogs. June.

Waldstenia, Willd.

fragarioides, Tratt. *Dalibarda fragarioides*, Michx. Woods. June.

Agrimonia, Tourn. Agrimony.

Eupatoria, L. Woods and pastures. July.

Potentilla, L. Cinquefoil.

fruticosa, L. Bogs. July—Sept.

Canadensis, L. *P. simplex*, Michx. *Five Finger*. Woods. May, June.

var. *pumila*. *P. Pumila*, Poir. Pastures, &c. May—Aug.

CATALOGUE OF PLANTS.

- Norvegica*, L. Old fields, &c. June—Aug.
tridentata, Ait. On the Alpine summits of Mansfield mountain and Camel's Hump, Robbins. July, Aug.
arguta, Pursh. *P. confertiflora*, Torrey. Rocky Hills. Pownal, Castleton, Robbins. Bellows Falls, Carey. May, June.
anserina, L. Overflowed places. June, July.
argentea, L. Dry hills, &c. Bellows Falls, Carey. Burlington, Macrae. Pownal, Robbins. June.
- Comarum*, L.
palustre, L. Bogs. Burlington, Robbins. Charleston, Carey. July.
- Fragaria*, Tourn. Strawberry.
Virginiana, Ehrh. Wild Strawberry. Woods and meadows. May.
vesca, L. Common "English" Wood Strawberry. Woods, especially on mountains. May.
- Dalibarda*, L.
repens, L. Woods, especially on mountains. June—Aug.
- Rubus*, L. Bramble.
odoratus, L. Flowering Raspberry. Shady rocky banks. June—Aug.
strigosus, Michx. Red Raspberry. About woods. May, June.
occidentalis, L. Thimble-berry. Black Raspberry. By fences, &c. May, June.
villosus, Ait. High Blackberry. Borders of woods and fields. June.
Canadensis, L. *R. trivialis*, Pursh. Low Blackberry. Fields, &c. June.
hispidus, L. *R. sempervirens* and *setosus*, Bigelow. Woods. June.
triflorus, Richardson. *R. saxatilis*, Michx. Swamps and woods. June.
- Rosa*, Tourn. Rose.
Carolina, L. Borders of swamps, &c. July.
lucida, Ehrh. Pastures, &c. June.
blanda, Ait. On rocks. Bellows Falls, Carey. Burlington, Macrae. On the ledge near High Bridge, Burlington, with *Phaca Robbinsii*, Oakes. June.
§ rubiginosa, L. Sweet Briar. Thickets, pastures, &c. June, July.
- Crataegus*, L. Hawthorn.
coccinea, L. Borders of thickets, &c. May, June.
tomentosa, L. var. *B.*, Torrey & Gray, 1—466. Thickets, &c. Bellows Falls, Carey. May, June.
punctata, Jacq. Borders of woods, &c. Ferrisburgh, Charlotte, Colchester, &c, Robbins, May, June.
- Pyrus*, L.
arbutifolia, L. f. var. *erythrocarpa*. Dry woods. June.
var. *melanocarpa*. Chokeberry. Swamps. June.
Americana, DC. *Sorbus Americana*, Willd. Mountain Ash. Woods, especially on mountains. June.
- Amelanchier*, Medic. DC. *Mespilus*, L. *Aronia*, Pers. Juneberry.
Canadensis, T. & G. 1—473. *Mespilus Can.* L. *Pyrus Botryapium*, L. fil.
var. *Botryapium*, T. & G. Woods, &c. May, June.
var. *oblongifolia*, T. & G. Woods, &c. May, June.
var. *rotundifolia*, T. & G. Rocky banks of rivers, &c. May, June.
var. *oligocarpa*, T. & G. Near the summits of Camel's Hump and Mansfield mountain, Robbins, Tuckermen, and Macrae. In a swamp at Guildhall, Carey. June.

ORDER LYTHRACEÆ. The Loosestrife Tribe.

- Decodon*, Gmelin.
verticillatum, Elliott. *Lythrum vert.*, L. Borders of ponds, &c. Colchester, Robbins.

ORDER ONAGRACEÆ. The Evening Primrose Tribe.

- Epilobium*, L. Willow Herb.
angustifolium, L. *E. spicatum*, Lam. Burnt woods, &c. July, Aug.
coloratum, Muhl. Wet places. July, Aug.
palustre, L. var. *albiflorum*, Lehm. *E. lineare*, Muhl. *E. squamatum*, Nuttall. Swamps. Aug.
- Oenothera*, L. Evening Primrose.
biennis, L. Old fields, &c. July, Aug.

CATALOGUE OF PLANTS.

- pusilla*, L. Old fields, &c. June—Sept.
Circaea, Tourn. *Enchanter's Nightshade*.
latifolia, L. Woods, &c. July.
alpina, L. Old woods, on fallen mossy trunks, &c. July, Aug.

SUB-ORDER HALORAGACEÆ.

- Proserpinaca*, L.
palustris, L. Ditches, borders of ponds, &c. July, Aug.
Myriophyllum, Vaill. *Water Milfoil*.
spicatum, L. In ponds, &c. July.

ORDER CUCURBITACEÆ. *The Gourd Tribe*.

- Sicyos*, L. *Single-seeded Cucumber*.
angulatus, L. Cultivated grounds and river banks. Aug.
Echinocystis, Torrey & Gray, 1, 542.
lobata, T. & G. *Momordica echinata*, Willd. *Hexameria echinata*, T. & G. in New York State Cat. p 137. Alluvial banks of rivers. On the Hoosic, Pownal, Vt., Oakes. On the Winooski, below High Bridge, Colchester, Robbins. Aug.

ORDER GROSSULARIACEÆ. *The Currant and Gooseberry Tribe*.

- Ribes*, L. *Currant and Gooseberry*.
Cynosbati, L. Rocky woods, &c. May.
lacustre, Poiret. Rocky mountain woods. May, June.
prostratum, L'Herit. *R. rigens* and *trifidum*, Michx. Mountain woods. May.
floridum, L'Herit. *Wild Black Currant*. Woods. Bridgewater, Thompson. May.
rubrum, L. *Red garden Currant*. Swamps. St. Johnsbury, Carey. Also on the rocky banks of the Winooski, Oakes. May, June.

ORDER CRASSULACEÆ. *The House-leek Tribe*.

- Penthorum*, L.
sedoides, L. Low moist places. July, Aug.

ORDER SAXIFRAGACEÆ. *The Saxifrage Tribe*.

- Saxifraga*, L. *Saxifrage*.
Virginiana, Michx. Rocks. May.
Pennsylvanica, L. Wet meadows and swamps. May, June.
Mitella, L.
diphylla, L. *False sanicle*. Woods. May.
nuda, L. *M. cordifolia*, Lam. *M. prostrata*, Michx. Shady bogs. May, June.
Tiarella, L. *Mitre Wort*.
cordifolia, L. Woods. May, June.
Chrysosplenium, Tourn. *Golden Saxifrage*.
Americanum, Schweinitz. *C. oppositifolium*, Michx. &c. not L. Wet boggy soil. May, June.

ORDER HAMAMELACEÆ. *The Witch Hazel Tribe*.

- Hamamelis*, L. *Witch Hazel*.
Virginiana, L. Woods, &c. Oct., Nov.

ORDER UMBELLIFERÆ. *The Umbelliferous Tribe*.

- Hydrocotyle*, Tourn. *Marsh Penny Wort*.
Americana, L. Swamps, &c. July, Aug.
Sanicula, Tourn. *Sanicle*.
Mariandica, L. Woods. June.
Cicuta, L.
maculata, L. *Water Hemlock*. Moist meadows, &c. July, Aug.
bulbifera, L. Borders of swamps, &c. August.
Sium, L. *Water Parsnip*.
latifolium, L. Wet places. July, Aug.
Cryptotaenia, DC.
Canadensis, DC. *Sison Canadense*, L. Shady banks, &c. July.
Zizia, Koch.
aurea, Koch. *Smyrnium aureum*, L. Meadows, &c. July.
integerrima, DC. *Smyrnium integerrimum*, L. Shady banks, &c. June.
Thaspium, Nutt.
cordatum, Torrey & Gray, 1, 615. Middlebury, James. June.

CATALOGUE OF PLANTS.

Conioselinum, Fisch.

Canadense, T. & G. 1, 619. *Selinum Can.*, Michx. *Cnidium Can.*, Spreng. Cedar swamps and wet woods. Fairhaven, and at the base of Mansfield mountain, Robbins. Burlington, Macrae. July.

Archangelica, Hoffm.

atropurpurea, Hoffm. *Angelica triquinata*, Michx. *Angelica*. Low grounds. July.

Pastinaca, Tourn.

§ *sativa*, L. *Common Parsnep*. By fences, &c. June, July.

Heracleum, L. *Cow Parsnep*.

lanatum, Michx. By fences, &c. June, July.

Osmorhiza, Raf.

longistylis, DC. *Sweet Cicely*. Woods. May, June.

brevistylis, DC. Woods. May, June.

Conium, L. *Hemlock*.

§ *maculatum*, L. *Poison Hemlock*. Road sides, &c. July, Aug.

ORDER ARALIACEÆ. *The Aralia Tribe.**Aralia*, L.

nudicaulis, L. *Wild Sarsaparilla*. Woods. May, June.

racemosa, L. *Spikenard*. Woods and shady banks. July.

hispida, L. *Burnt woods*, &c. July.

Panax, L. *Ginseng*.

quinquefolium, L. *Common Ginseng*. Woods. July.

trifolium, L. *Dwarf Ginseng*. Moist woods. May.

ORDER CORNACEÆ. *The Dogwood Tribe.**Cornus*, L. *Dogwood*.

alternifolia, L. Woods. June.

circinata, L. Woods, &c. Middlebury, James. Castleton, Colchester, and Burlington, Robbins. Bellows Falls, Carey. June.

stolonifera, Michx. *Cornus alba*, Wang. Banks of streams, &c. May, June.

paniculata, L'Her. Borders of woods, &c. June.

sericea, L. Low grounds, &c. July.

florida, L. *Common Dogwood*. Woods. Castleton, Robbins. May, June.

Canadensis, L. Woods. May.

ORDER CAPRIFOLIACEÆ. *The Honeysuckle Tribe.**Linnaea*, Gronov.

borealis, Gronov. *Linnaea*. Old woods. June, July.

Symphoricarpus, Dillenius.

racemosus, Michx. *Snowberry*. Rocky banks. On Grand Isle and South Hero, at the "Point of Rocks" in Shoreham, and at Fort Cassin, Robbins. On the extremity of Sharpshin Point, Burlington, Macrae. July, Aug.

Lonicera, L. *Honeysuckle*.

hirsuta, Eaton. Rocky woods. Middlebury, James. Castleton, Branch. Pownal, Robbins. June.

parviflora, Lam. Rocky banks, &c. June.

ciliata, Muhl. Shady ledges, &c. May, June.

cærulea, L. *Xylosteum villosum*, Michx. Bogs, &c. May, June.

Diervilla, Tourn.

trifida, Mœnch. *D. Canadensis*, Willd. Rocky woods. July.

Triosteum, L.

perfoliatum, L. *Feverwort*. Rocky woods, &c. Bennington, Robbins. May, June.

Sambucus, Tourn. *Elder*.

Canadensis, L. *Common Elder*. Along fences, &c. July.

pubens, Michx. *Red-berried Elder*. Woods and mountains. May.

Viburnum, L.

nudum, L. *V. pyriform*, Pursh. *V. cassinoides*, L. Moist woods, &c. June.

Lentago, L. Moist thickets. June.

dentatum, L. *Arrow wood*. Moist thickets. June.

pubescens, Pursh. Dry rocky banks. Middlebury, James. Shoreham, Castleton, and Westhaven, Robbins. Sharpshin Point and a high rock behind it, Burlington, Macrae. June.

CATALOGUE OF PLANTS.

- acerifolium*, L. Rocky woods. June.
Opulus, L. var. *Americanum*, Ait. *V. Oxyccous*, Pursh. *Cranberry Bush*.
 Woods, &c. May, June.
 var. *eradiatum*, Oakes in Hovey's Mag., May, 1841. *V. pauciflorum*, La
 Pylaie. T. & G. 2, 17. Near the summit of the
 Mansfield mountain, *Tuckerman* and *Macrae*. July.
Lantanoidea, Michx. *Hobble Bush*. Old woods. May, June.

ORDER RUBIACEÆ. *The Madder Tribe.*

- Houstonia*, L.
cerulea, L. Wet pastures, &c. May, June.
longifolia, Michx. Dry woods. July.
Galium, L. *Bedstraw*.
Aparine, L. Goose grass. *Cleavers*. Shady banks. June.
trifidum, L. *G. tinctorium*, L. *G. obtusum*, Bigel. Low grounds. June, July.
asprellum, Michx. Moist thickets. July.
triflorum, Michx. Woods. June, July.
pilosum, Ait. Dry pastures, &c. Pownal. *Robbins*. June.
circaezans, Michx. Woods. June, July.
 var. *lanceolatum*, Torr. & Gray. *G. lanc.* Torrey. Woods. Castleton,
 Branch. Middlebury, *Burge*. Essex, *Robbins*. Bellows
 Falls, *Carey*.
 var. *montanum*, T. & G. 2, 24. *G. Littellii*, Oakes in Hovey's Magazine,
 May, 1841. On the sides of Camel's Hump mountain,
Robbins. Notch of Mansfield mountain, *Tuckerman* and
Macrae. July, August. A pubescent var. grows on
 Sharpshin Point, Burlington, *Macrae*.
Cephalanthus, L. *Button Bush*.
occidentalis, L. Small ponds and wet places. July, August.
Mitchella, L. *Checker-Berry*.
repens, L. Woods. June, July.

ORDER VALERIANACEÆ. *The Valerian Tribe.*

- Valeriana*, Tourn. *Valerian*.
sylvatica, Herb. Banks. Cedar and other swamps. Fairhaven and Craftsbury.
Robbins. May—July.

ORDER DIPSACEÆ. *The Teasel Tribe.*

- Dipsacus*, L. *Teasel*.
 ? *sylvestris*, L. *Wild Teasel*. Waste grounds. Castleton, *Reed*.

ORDER COMPOSITÆ.

- Vernonia*, Schreber.
Novaboracensis, Willd. *Iron-weed*. Low grounds. Middlebury, *James*. Aug.
Eupatorium, L.
perfoliatum, L. *Thorough wort*. Bogs and wet grounds. Aug.
ageratoides, L. f. Shady banks, &c. August, Sept.
purpureum, L. *E. verticill.* and *maculatum*, L. Moist grounds. Aug., Sept.
Nardosmia, Cass. L.
palmata, Hook. *Tussilago palmata*, Ait. Swamps. Fairhaven, *Robbins*.
 April, May.
Tussilago, Tourn.
 ? *f. Farfara*, L. *Colts-foot*. Banks of streams, and moist banks. Pownal, Oakes.
 Danby, Castleton, Grand Isle, Arlington, &c., *Robbins*.
 Burlington, *Tuckerman*. Rockingham, *Carey*. April, May.
Aster, L. *Starwort*.
coryzoides, Willd. Dry open woods, &c. Pownal and Arlington, *Robbins*.
 July, August.
levis, L. Borders of woods, &c. Bellows Falls, &c., *Carey*. Aug., Sept.
undulatus, L. Dry woods, &c. Burlington, *Macrae*. Bellows Falls, *Carey*.
 August, Sept.
corymbosus, Ait. Woods and shady banks, Aug., Sept.
cordifolius, L. Woods, &c. Sept.
multiflorus, Ait. Dry hills, pastures, &c. Pownal, *Robbins*. Aug., Sept.

CATALOGUE OF PLANTS.

- dumosus*, L. var. *strictior*, T. & G., 2, 128. Borders of woods, &c.
Tradescanti, L. var. *fragilis*, T. & G., 2, 129. Rocky banks of the Winooski, Colchester and Burlington, *Robbins*. Aug., Sept.
miser, L. var. *hirsuticaulis*. T. & G., 2, 131. Borders of thickets, &c. Bellows Falls, *Carey*. Burlington, *Macrae*. Aug., Sept.
simplex, Willd. Wet grounds. Bellows Falls, *Carey*. August, Sept.
pratensis, Poir. Moist woods, &c. Bellows Falls, *Carey*. August, Sept.
punicus, L. Low moist grounds. August, Sept.
Nova-Angliae, L. Moist grounds, &c.—Middlebury, *James*. Sept.
acuminatus, Michx. Woods. August, Sept.
ptarmicoides, T. & G., 2, 160. *Chrysopsis alba*, Nutt. *Heleastrum album*, DC. Rocky hills, Pownal, *Robbins*. August.
linariifolius, L. Dry sandy pastures, &c. August, Sept.
umbellatus, Miller. Moist thickets. August, Sept.
macrophyllus, L. Dry woods. Sept.
- Erigeron*, L. *Flea-bane*.
Canadense, L. Old fields, &c. July—Oct.
bellidifolium, Muhl. *Poor Robert's Plantain*. Borders of woods, &c. May, June.
Philadelphicum, L. *E. purpureum*, Ait. Banks of rivers. Putney, *Reed*. Burlington, *Robbins*. Bellows Falls, *Carey*. June.
strigosum, Muhl. *E. Philadelphicum*, and *E. integrifolium*, Bigel. Fields, &c. June—Aug.
annuum, Pers. *E. heterophyllum*, Muhl. *E. strigosum*, Bigel. Old fields, &c. July, August.
- Solidago*, L. *Golden Rod*.
Canadensis, L. About fences and woods. August, Sept.
gigantea, Ait. Borders of woods, &c. Bellows Falls, *Carey*. August, Sept.
juncea, Ait. *S. arguta*, Torr. and Gray. Borders of woods, &c. Burlington, *Carey*.
neglecta, Torrey & Gray. Moist woods, &c. Fairhaven, *Robbins*. Aug., Sept.
altissima, L. Low grounds, &c. August, Sept.
nemoralis, Ait. Dry fields and hills. August, Sept.
odora, Ait. Woods. August, Sept.
bicolor, L. Dry woods. August, Sept.
caesia, L. Woods. Bellows Falls, *Carey*. Sept.
flexicaulis, L. *S. latifolia*, L. Shady banks and woods. Sept.
virgaurea, L. Bigel. *S. thyrsoides*, E. Meyer. T. & G., 2, 207. Woods on the sides of Killington Peak and of Mansfield Mountain. *Robbins*. August.
squarrosa, Muhl. Dry banks and woods. Castleton, Essex and Colchester, *Robbins*. August, Sept.
lanceolata, L. Low grounds, &c. August, Sept.
humilis, Pursh, 2, 543. On limestone rocks at Winooski falls, Colchester, and also on the ledge with *Phaca Robbinsii*, Burlington, *Robbins*. August.
- Inula*, L.
Helenium, L. *Elecampane*. Road sides. August.
- Xanthium*, L. *Cocklebur*.
Strumarium, L. var. *Canadense*, Torrey and Gray. Road sides, &c. Middlebury, *James*. South Hero, *Robbins*. Burlington, *Carey*. August.
- Ambrosia*, L.
Artemisiaefolia, L. *A. elatior*, L. *Bitter Weed*. Old fields, &c. Aug., Sept.
trifida, L. Low grounds. Pownal, *Robbins*. August, Sept.
- Rudbeckia*, L.
laciniata, L. Low grounds, &c. August, Sept.
- Helianthus*, L. *Sun flower*.
divaricatus, L. Sandy woods, &c. August, Sept.
decapetalus, L. Moist places and woods about Burlington and Colchester, *Macrae*. August, Sept.
- Bidens*, L. *Bur Marigold*.
frondosa, L. Moist fields, &c. August, Sept.

CATALOGUE OF PLANTS.

- chrysanthemoides*, Michx. Wet grounds. Bellows Falls, Carey. Aug., Sept.
cernua, L. Wet grounds. August, Sept.
Beckii, Torrey. Lakes, ponds, &c. In Lake Champlain, near Benson, Chandler. August, Sept.
connata, Muhl. Moist grounds. Middlebury, James. August, Sept.
- Anthemis*, L.
cotula, L. May weed. Road sides, &c. July—Sept.
- Achillea*, L. Yarrow, Milfoil.
 § *Millefolium*, L. Pastures, &c. July, August.
- Chrysanthemum*, L.
leucanthemum, L. Whiteweed. Pastures and grass fields. June—Aug.
- Artemisia*, L. Wormwood.
 § *Absinthium*, L. Common Wormwood. Road sides, &c. Naturalized abundantly in Danby, Barre, Williamstown, Mount Tabor, Dorset, Pownal, &c., Robbins. Aug.
 § *vulgaris*, L. Mugwort. Road sides, &c. In Castleton, Branch. Middlebury, Burge. In North Hero, St. Albans, Georgia, Danby, &c. Robbins. Hubbardton, Chandler. Swanton, Carey. Colchester, Oakes. July, August.
- Tanacetum*, L. Tansy.
 § *vulgare*, L. Common Tansy. Road sides, &c. August.
- Gnaphalium*, L. Cudweed.
decurrens, Ives. Fields and pastures. Near Mansfield Mountain, Robbins. Highgate, Tuckerman. Bellows Falls, Carey. Burlington and Colchester, Oakes. August, Sept.
polycepalum, Michx. Life everlasting. Fields and pastures. August, Sept.
uliginosum, L. Low grounds. August, Sept.
- Antennaria*, R. Br.
margaritacea, R. Br. *Gnaphalium marg.* L. Pastures, &c. August, Sept.
plantaginea, R. Br. *Gnaph. plant.* L. Pastures, &c. April, May.
- Senecio*, L. Groundsel.
Balsamita, Muhl. Rocky banks. June.
obovatus, Muhl. Dry rocky banks, &c. Bennington and Pownal, Robbins. May, June.
aureus, L. Bogs, &c. June.
 var. *lanceolatus*, Oakes, in Hovey's Mag. May, 1841. In a cedar swamp at Brownington, Robbins. July.
hieracifolius, L. Fireweed. Low grounds, &c. Aug.
- Cirsium*, Tourn. Thistle.
 § *lanceolatum*, Scop. *Cardus lanceolatus*, L. Road-sides, &c. July—Sept.
discolor, Spreng. *Cnicus discolor*, Muhl. Fields and woods. Aug.
pumilum, Spreng. *Cnicus odoratus*, Muhl. *Carduus pumilus*, Nutt. Pastures. Essex, Robbins. Bellows Falls, Carey. Sept., Oct.
muticum, Michx. *Cnicus glutinosus*, Big. Moist woods. August, Sept.
 § *arvense*, Scop. *Cnicus arvensis*, Hoff. Canada Thistle. Fields, meadows, roadsides, &c. July, Sept.
- Onopordon*, L. Cotton Thistle.
 § *Acanthium*, L. Dry pastures, &c. Williston and Grand Isle, Robbins.
- Arctium*, L.
Lappa, L. Burdock. Waste places. July—Sept.
- Lactuca*, Tourn. Lettuce.
elongata, Muhl. Along fences, &c. July.
 var. *sanguinea*. *L. sanguinea*, Big. Dry pine woods. July, Aug.
- Leontodon*, L.
Taraxacum, L. Dandelion. Fields, gardens, &c.
- Sonchus*, L. Sow thistle.
oleraceus, L. Common Sow thistle. Gardens, &c. August, Sept.
 var. *spinulosus*, *S. spinulosus*, Bigel. *S. oleraceus* E. Smith E. H., 3, 344. Pluk. t. 61, f. 5. Waste grounds, &c. Bellows Falls, Carey. Common in the east of Massachusetts, and apparently a starved variety of *S. oleraceus*, though the ochenia are also smoother than in the common variety.
- floridanus* ? L. *S. acuminatus*, Bigelow. Moist woods. August, Sept.
- Hieracium*, L. Hawk-weed.

CATALOGUE OF PLANTS.

- venosum*, L. Dry open woods, &c. June.
Marianum, Willd. Dry woods, &c. Aug.
Canadensis, Michx. *H. Kalmii*, Bigelow, &c. Borders of woods. Aug.
paniculatum, L. Dry woods. Aug.
Krigia, Schreber.
Virginica, Willd. Dry sandy pastures, &c. Middlebury, James. May—July.
Prenanthes, Vaill.
altissima, L. Shady banks, &c. August, Sept.
alba, L. Woods, &c. August, Sept.

ORDER LOBELIACEÆ. *The Lobelia Tribe.*

- Lobelia*, L.
Kalmii, L. Moist rocks and bogs. Brownington and Colchester, Robbins.
 Burlington, Carey, Macrae, Oakes. July, Aug.
Claytoniana, Michx. *L. pallida*, Muhl. Moist meadows. June.
Cardinalis, L. *Cardinal Flower*. Wet places. August, Sept.
inflata, L. *Indian Tobacco*. Fields, road-sides, &c. Aug.

ORDER CAMPANULACEÆ. *The Bell Flower Tribe.*

- Campanula*, L. *Bell Flower*.
rotundifolia, L. *Hare-bell*. Rocky banks, &c. June, July.
amplexicaulis, Michx. *C. perfoliata*, L. Dry ledges, &c. Middlebury, James.
 Fairhaven, Chandler. June, July.
sparinoides, Pursh. Wet meadows, &c. June, July.

ORDER ERICACEÆ. *The Heath Tribe.*

- Andromeda*, L.
polifolia, L. Sphagnous bogs, especially on the edges of ponds. May, June.
paniculata, L. *Pepper bush*. Swamps, &c. Pownal, Robbins. Bellows Falls,
 Carey. Ludlow, Washburn. June, July.
calyculata, L. Bogs, &c. May.
Arbutus, L.
Uva-ursi, L. *Bear berry*. Rocky hills, &c. April, May.
Gaultheria, L.
procumbens, L. *Partridge Berry*. Dry woods. June, July.
Rhododendron, L. *Rosebay*.
nudiflorum, Torr. *Azalea nudiflora*, L. *Wild Honeysuckle*. Swamps and moist
 woods. Middlebury, James. Pownal, Oakes. Fairhaven and
 Georgia, Robbins. Bellows Falls, Carey. Ludlow, Washburn.
 June.
viscosum, Torrey. *Azalea viscosa*, L. Swamps. Middlebury, James. July.
Canadense, Torrey. *Rhodora Can.*, L. Bogs, &c. Brattleboro', Robbins.
 Guildhall, Carey. May, June.
Kalmia, L.
latifolia, L. *Calico bush*. *High Laurel*. Rocky hills, &c. Rockingham, Carey.
 June, July.
angustifolia, L. *Sheep Laurel*. *Low Laurel*. Moist places. June, July.
glauca, Ait. Sphagnous bogs. May, June.
Epigæa, L.
repens, L. *Ground Laurel*. Sandy woods and on mountains. April, May.
Ledum, L.
latifolium, L. *Labrador Tea*. Bogs. On the summits of Camel's Hump and
 Mansfield mountains, Robbins and Tuckerman. May, June.
Vaccinium, L.
frondosum, L. *Dangleberry*. Woods. Middlebury, James. June.
resinosum, Ait. "*Huckleberry*," or *Black Whortleberry*. Dry woods, &c. May
 June.
corymbosum, L. *High Blueberry*. Swamps, &c. May, June.
Pennsylvanicum, Lam. *V. virgatum*, Ait. Big. *Low Blueberry*. Dry woods.
 Essex, Robbins. May, June.
tenellum, Ait. Big. *Low Blueberry*. Dry woods, pastures, &c. On the summits
 of Camels Hump and Mansfield mountains, Robbins, Macrae,
 and Tuckerman. May, June.

CATALOGUE OF PLANTS.

- Canadense*, Richardson. *Low Blueberry*. Pastures, swamps, &c. Bellows Falls, Carey. Fairhaven, Oakes. May, June.
uliginosum, L. On the summits of Mansfield and Camel's Hump mountains. Robbins, Tuckerman, and Macrae. June.
Vitis Idea, L. *Cowberry*. With the preceding, R., T. and M. June, July.
macrocarpon, Ait. *Common Cranberry*. Bogs, &c. June.
oxycoccus, L. *Small Cranberry*. Bogs. On the summit of Mansfield mountain, Robbins. June, July.

Lasierpa, Torr.

- hispidula*, Torr. *Gaultheria serpyllifolia*, Pursh. Old pine woods and swamps. May, June.

Pyrola, L. *Winter green*.

- rotundifolia*, L. Woods. July.
chlorantha, Swartz. *P. asarifolia*, Torrey. Not of Michx. Old pine woods, &c. June, July.
elliptica, Nutt. Dry woods. July.
secunda, L. Old Pine woods, &c. June, July.
uniflora, L. Rare. In a cedar swamp, Brownington, Robbins. In Pine woods, Burlington and High Bridge, Macrae. In Charleston, with *calypso borealis*, Carey. July.
umbellata, L. *Pipsissewa*. Dry woods. July.
maculata, L. Dry woods. Middlebury, James. July.

Monotropa, L.

- uniflora*, L. *Indian Pipe*. Woods. July.

Hypopithys, Dillen. *Pine sap*.

- lanuginosa*, Nutt. *Monotropa lanuginosa*, Michx. Woods. July, Aug.

Pterospora, Nutt.

- andromedea*, Nutt. Dry rocky pine woods, near High Bridge, Colchester, Robbins, and Burlington, Oakes. Shady rich soil on the rocks of Sharpshin Point, Burlington, Macrae. July.

ORDER AQUIFOLIACEÆ. *The Holly Tribe.**Nemopanthes*, Raf.

- Canadensis*, Raf. *Ilex Canadensis*, Michx. Swamps, &c. May.

Prinos, L.

- verticillatus*, L. *Black Alder*. *Winter Berry*. Swamps. Middlebury, James. July.

ORDER OLEACEÆ. *The Olive Tribe.**Fraxinus*, L. *Ash*.

- sambucifolia*, Lam. *Black Ash*. Moist woods, Middlebury, James. Lyndon, Carey. In Vermont, Tuckerman. May.
acuminata, Lam. *F. Americana*, Michx. f. *White Ash*. Woods. May.
pubescens, Walter. *F. tomentosa*, Michx. f. *Red Ash*. Woods, &c. In Castleton, Chandler. In Burlington, and in Grand Isle, Robbins. May.

ORDER APOCYNACEÆ. *The Dog's-bane Tribe.**Apocynum*, L. *Dog's-bane*.

- androsaemifolium*, L. Borders of woods, by fences, &c. June, July.
hypericifolium, Ait? Pursh. Gravelly banks of ponds and rivers. June, July.

ORDER ASCLEPIADACEÆ. *The Milkweed Tribe.**Asclepias*, L. *Milkweed*.

- Syriaca*, L. *Common Milkweed*. Along fences, &c. July.
phytolaccoides, Pursh. Woods, &c. July.
incarnata, L. Low grounds. July, August.
obtusifolia, Michx. Dry sandy soil. July.
quadrifolia, Jacq. Rocky woods. June.
tuberosa, L. *Pleurisy-Root*. Sandy fields, &c. Pownal, Robbins. Bellows Falls, Carey. July, August.
debilis, Michx. Shady dell near Burlington, Macrae. July.

CATALOGUE OF PLANTS.

ORDER GENTIANACEÆ. *The Gentian Tribe.*

Gentiana, L. *Gentian*.

saponaria, L. *Soap-wort Gentian*. Moist thickets, &c. August, Sept.

quinqueflora, L. Woods. Castleton, *Reed*. Pownal, *Robbins*. Rockingham, *Carey*. August.

crinita, Frœl. Wet meadows. Sept., Oct.

Centaurella, Michx.

Virginica. *Sagina Virginica*, L. *Centaurella paniculata*, Michx. *C. autumnalis*, Pursh. Swamps, &c. Rockingham, *Carey*. August, Sept.

Menyanthes, L.

trifoliata, L. *Buckbean*. Bogs, &c. Burlington and Georgia, *Robbins*. Derby, *Carey*. Colchester, *Macrae*. May, June.

ORDER CONVULVULACEÆ. *The Bindweed Tribe.*

Convolvulus, L. *Bind weed*.

sepium, L. Moist borders of thickets, &c. July.

spithameus, L. Dry sandy plains. July.

Cuscuta, L. *Dodder*.

Americana, L. Low grounds. August.

ORDER BORAGINACEÆ.

Lithospermum, L. *Gromwell*.

§ *officinale*, L. Dry pastures, &c. Sudbury and Benson, *Chandler*. Middlebury, St. Albans, and South Hero, *Robbins*. Burlington, *Macrae*, *Oakes*. June, July.

§ *arvense*, L. *Corn Gromwell*. Old wheat fields, &c. May.

Lycopsis, L.

§ *arvensis*, L. Road sides, &c., in dry soil. Pownal, *Reed*.

Echinospermum, Lehm.

§ *Lappula*, Lehm. *Myosotis Lappula*, L. Road sides, &c. July, Aug.

Virginianum, Lehm. Borders of thickets, road sides, &c. Bellows Falls, *Carey*. July.

Cynoglossum, L. *Hound's Tongue*.

§ *officinale*, L. Road sides, &c. May, June.

Virginianum, L. Woods. Rare. June.

ORDER HYDROPHYLLACEÆ.

Hydrophyllum, L.

Virginianum, L. Woods. June.

Canadense, L. Woods. At the base of Mansfield mountain, and frequent in the south west of Vermont, *Robbins*. June.

ORDER LABIATÆ. *The Mint Tribe.*

Lycopus, L. *Water Horehound*.

sinuatus, Ell. *L. Europæus*, Pursh., not of Linn. Low grounds. Aug.

Virginicus, L. Low grounds. Aug.

Mentha, L. *Mint*.

§ *Piperito*, L. *Peppermint*. Ludlow, *Washburn*.

borealis, Michx.? *Tor.* Manual, Bigel. Wet grounds. Aug.

Canadensis, L.? *Torrey*, Manual. Banks of rivers, &c. On the Hoosic, at Pownal, *Oakes*.

§ *viridis*, L. *Spearmint*. Moist meadows, about springs, &c. July, Aug.

Monarda, L. *Horsemint*.

fistulosa, L. *M. allophylla*, Michx. *M. oblongata*, Ait. Dry rocky woods. At Middlebury, *James*. July, Aug.

Blephilia, Raf.

hirsuta, Raf. *Monarda hirsuta*, Pursh. In Castleton, *Branch*. In a wet meadow, Craftsbury, *Robbins*. In moist woods, Chester, *Oakes*. July, August.

Pycnanthemum, Michx.

incanum, Michx. *Mountain Mint*. Rocky woods. Cavendish, *Macrae*. Aug.

lanceolatum, Pursh. Borders of thickets, &c. Pownal, *Robbins*. Bellows Falls, *Carey*. July, Aug.

CATALOGUE OF PLANTS.

- muticum*, Pursh. Pastures, &c. Pownal, Robbins. July, Aug.
Collinsonia, L.
Canadensis, L. Horse-weed. Shady banks, &c. Middlebury, James. Arlington, Robbins. July, Aug.
Hedeoma, Pers.
pulegioides, Pers. Penny-royal. Pastures, &c. Middlebury, James. Bellows Falls, Carey.
Melissa, L. Balm.
§ Clinopodium, Benth. *Clinopodium vulgare*, L. Rocky banks. July.
Prunella, L.
vulgaris, L. Self Heal. Pastures, &c. June—Sept.
Scutellaria, L. Scullcap.
lateriflora, L. Common Scullcap. Low grounds. Aug.
galericulata, L. Moist places. Aug.
parvula, Michx. *S. ambigua*, Nutt. Sharpshin Point, Burlington, Macrae. July.
Lophanthus, Benth.
nepetoides, Benth. *Hyssopus nepetoides*, L. Thickets and along fences. Middlebury, James. Rutland, Branch. Pownal, Bennington, and Arlington, Robbins. July, Aug.
Nepeta, L.
§ Cataria, L. Catnep. Roadsides, &c. July, Aug.
§ Glechoma, Benth. *Glechoma hederacea*, L. Ground Ivy. Gill. On cultivated grounds, &c. May, June.
Leonurus, L.
§ Cardiaca, L. Motherwort. Roadsides, &c. July, Aug.
Stachys, L. Hedge Nettle.
aspera, Michx. Old fields, &c. Grand Isle and South Hero, Robbins. Burlington, Macrae and Tuckerman. July Aug.
Galeopsis, L. Hemp Nettle
§ Tetrahit, L. Roadsides, &c. July, Aug.
§ Ladanum, L. Waste places, &c. Bellows Falls, Carey. July.
Teucrium, L. Germander.
Canadense, L. Low grounds. South Hero, Robbins. Bellows Falls, Carey. Red Rocks, Burlington, Macrae. July, Aug.

ORDER SOLANACEÆ. The Night Shade Tribe.

- Solanum*, L. Night Shade.
§ Dulcamara, L. Bitter-sweet. Roadsides, &c. July, Aug.
§ nigrum, L. Cultivated grounds. July, Aug.
Physalis, L. Ground Cherry.
viscosa, L. Dry fields, &c. Pownal, Robbins. June, July.
Datura, L.
§ Stramonium, L. Thorn Apple. Waste grounds. July—Sept.
Hyoscyamus, L. Henbane.
§ niger, L. Roadsides, &c. Panton, Burge. Mount Independence, Dr. Hill. June, July.

ORDER SCROPHULARIACEÆ. The Figwort Tribe.

- Verbascum*, L. Mullein.
§ Thapsus, L. Common Mullein. Old fields, &c. July, Aug.
Veronica, L. Speedwell.
§ serpyllifolia, L. Meadows and Pastures. May, June.
scutellata, L. Ditches, &c. June.
Beccabunga, L. Brooklime. In grounds wet by springs, &c. June.
Anagallis, L. Water Speedwell. Ditches, &c. Middlebury, Burge. June, July.
pergrina, L. Cultivated grounds. Middlebury, James. May, June.
§ arvensis, L. Old fields, &c. May, June.
Virginica, L. Moist bank on Mr. U. H. Penniman's grounds, with *Trillium grandiflorum*, Colchester, Oaks. Aug.
Linaria, Tourn. Toad Flax. Snap Dragon.
§ vulgaris, Moench. *Antirrhinum Linaria*, L. Roadsides, &c. Manchester, Robbins. July—Sept.

CATALOGUE OF PLANTS.

- Canadensis*, Spreng. Moist bare soils. Bellows Falls, Carey. July, Aug.
Scrophularia, L. Figwort.
Marilandica, L. Along fences, &c. Middlebury, James. Colchester, Robbins.
 July, Aug.
Mimulus, L. Monkey Flower.
ringens, L. Wet grounds. Aug.
Gratiola, L. Hedge Hyssop.
aurea, Muhl. Borders of Ponds, &c. Middlebury, James. August, Sept.
Lindernia, L.
Pyxidaria, L.
var. dilatata. *L. dilatata*, Muhl. Moist open grounds. Middlebury, James.
 Brattleboro' and West Haven, Robbins.
var. attenuata. *L. attenuata*, Muhl. Craftsbury and Cambridge, Robbins.
 July, Aug.
Chelone, L. Snake-head.
glabra, L. Borders of swamps, &c. August, Sept.
Pentstemon, L'Her.
pubescens, Ait. Rocky hills, &c. Middlebury, James. Castleton, Chandler.
 Benson, Prof. Woodward. Pownal, Robbins.
Gerardia, L.
tenuifolia, Vahl. Dry soil. Pownal and Brattleboro', Robbins. Bellows Falls,
 Carey. Aug.
flava, L. Dry woods. Near Bellows Falls, Carey. Aug.
pedicularia, L. Dry woods, &c. Pownal, Robbins. Bellows Falls, Carey.
 August.
quercifolia, Pursh. Woods. Castleton and Pownal, Robbins.
Pedicularis, L. Lousewort.
Canadensis, L. Borders of woods, &c. May, June.
Castilleja, Mutis. *Bartsia*, L.
pallida, Kunth. *Bartsia pallida*, L. On the north side of Mansfield mountain,
 near the summit, Tuckerman and Macrae. July.
Melampyrum, L. Cow Wheat.
Americanum, Michx. Woods. June—Aug.

ORDER OROBANCHACEÆ. The Broom-Rape Tribe.

- Orobanche*, L. Broom-rape.
Americana, L. Woods. On White Creek, Chandler. - Sharpshin Point,
 Burlington, Macrae.
uniflora, L. Woods. June.
Epiphegus, Nutt. Beech Drops.
Virginiana. *Orobanche Virginiana*, L. *Epiphegus Americanus*, Nutt. Woods,
 under beech trees. Sept.

ORDER VERBENACEÆ. The Vervain Tribe.

- Verbena*, L. Vervain.
hastata, L. Low grounds, roadsides, &c. July, Aug.
urticifolia, L. Roadsides, &c. July.
Phryma, L.
leptostachya, L. Woods and shady banks. Middlebury, James. South Hero
 and Arlington, Robbins. Bellows Falls, Carey. Burlington,
 Oakes. July.

ORDER ACANTHACEÆ

- Justicia*, L.
Americana, Vahl. *J. pedunculosa*, Michx. In water. "At Ferrisburgh." Dr.
 Paddock's herbarium in the Museum of the University at
 Burlington, the specimen thus ticketed, seen by Dr. Robbins.

ORDER LENTIBULACEÆ.

- Utricularia*, L. Bladder-wort.
vulgaris, L. In ditches, ponds, &c. Aug.
cornuta, Michx. Bogs, &c. Vermont, Carey. July, Aug.

CATALOGUE OF PLANTS.

ORDER PRIMULACEÆ. *The Primrose Tribe.**Trientalis*, L.*Americana*, Pursh. Wet woods and swamps. May, June.*Lysimachia*, L. *Loose-strife*.*thyrsiflora*, L. Swamps. Castleton, Chandler. Burlington, Macrae.*stricta*, Ait. Low grounds, &c. July.*quadrifolia*, L. Woods. June, July.*ciliata*, L. Borders of woods, &c. July.*hybrida*, Michx. Wet grounds. Ferrisburgh and South Hero, Robbins. July.*Samolus*, L. *Water Pimpernel*.*Valerandi*, L. Borders of rivers. Middlebury, James. July—Sept.ORDER PLANTAGINEÆ. *The Plantain Tribe.**Plantago*, L. *Plantain*.§ *major*, L. *Common Plantain*. About houses, fields, &c. June—Sept.ORDER AMARANTHACEÆ. *The Amaranth Tribe.**Amaranthus*, L.§ *hybridus*, L. Gardens, &c. Aug.*Blitum* ? L. Cultivated and waste grounds. Pownal, Robbins. Aug.ORDER CHENOPODIACEÆ. *The Goosefoot Tribe.**Chenopodium*, L. *Goosefoot*.§ *album*, L. Gardens, fields, &c. July, August.§ *Botrys*, L. *Jerusalem Oak*. Sandy banks of Lake Champlain, &c. Alburgh, Robbins. Middlebury, James. Burlington, Oakes. Bellows Falls, Carey. July, August.§ *hybridum*, L. Waste grounds. August.§ *rubrum*, L. Cultivated grounds. Bennington, Robbins. August.*Blitum*, L.§ *capitatum*, L. *Strawberry Blite*. Road sides, &c. Hubbardton, Branch. Newport, Robbins. North Troy, Carey. June.

ORDER PHYTOLACEÆ.

Phytolacca, L.*decandra*, L. *Poke*. Waste places, &c. July—Oct.ORDER POLYGONACEÆ. *The Buckwheat Tribe.**Polygonum*, L. *Knotweed*.§ *aviculare*, L. *Knot-grass*. About houses, &c. June—Oct.*Virginianum*, L. Rocky woods. Arlington and Castleton, Robbins. Waterbury, Macrae. July, August.*Hydropiper*, L. *Water Pepper*. Low grounds, ditches, &c. August.*mitis*, Pers. Wet places. West Haven, Robbins. Castleton, Chandler. July, August.§ *Persicaria*, L. Gardens, &c. July—Sept.*amphibium*, L. *var. natans*, Michx. Floating in water.*var. emersum*, Michx. Margin of ponds, &c. Aug., Sept.*Pennsylvanicum*, L. Low grounds, &c. July, August.*sagittatum*, L. *Scratch-grass*. Low grounds. August, Sept.*arifolium*, L. Swamps, &c. August, Sept.*scandens*, L. Fields, &c. July, August.*cilinode*, Michx. Woods, &c. July, August.§ *convolvulus*, L. Road sides. July, August.§ *Fagopyrum*, L. *Buckwheat*. Old fields, &c. July, August.*Rumex*, L. *Dock*.§ *crispus*, L. *Curled Dock*. Cultivated grounds. July, August.§ *obtusifolius*, L. Cultivated grounds. June, July.*verticillatus*, L. In water. July.§ *Acetosella*, L. *Sheep Sorrel*. Pastures and cultivated grounds. May—July.

CATALOGUE OF PLANTS.

ORDER LAURACEÆ. *The Cinnamon Tribe.**Laurus, L.**sassafras, L.* Common Sassafras. Woods, &c. Pownal, Robbins. May.*Benzoia, L.* Fever Bush. Swamps, &c. Bellows Falls, Carey. May.ORDER ELEAGNACEÆ. *The Oleaster Tribe.**Shepherdia, Nutt.**Canadensis, Nutt.* Rocky banks of Lake Champlain, &c. May.ORDER THYMELACEÆ. *The Mexaron Tribe.**Dirca, L.* Leather-wood.*palustris, L.* Moist woods. April, May.ORDER SANTALACEÆ. *The Sanders-wood Tribe.**Nyssa, L.**multiflora, Walt.* *N. sylvatica, Michx. f. N. villosa, Willd.* Tupelo, or Sour Gum. Woods and swamps. Craftsbury, Robbins. June.*Comandra, Nutt.**umbellata, Nutt.* *Thesium umb., L.* Borders of woods, &c. June.ORDER ARISTOLOCHIACEÆ. *The Birthwort Tribe.**Asarum, Tourn.**Canadense, L.* Wild Ginger. Rocky woods. May.ORDER EMPETRACEÆ. *The Crowberry Tribe.**Empetrum, L.**nigrum, L.* Crowberry. Summit of the Mansfield and Camel's Hump Mountains, Robbins, Tuckerman and Macrae. June, July.ORDER EUPHORBIACEÆ. *The Spurge Tribe.**Acalypha, L.* Three-seeded Mercury.*Virginica, L.* Fields and road sides. Middlebury, James.*Euphorbia, L.* Spurge.§ *Helioscopia, L.* Waste ground, &c. In Addison county, Burge. July, Aug.§ *platyphylla, L.* *E. obtusata?* Pursh. Road sides, &c. Benson, Chandler. Vergennes, South Hero, and Grand Isle, Robbins. Aug.*maculata, L.* Sandy fields, &c. July—Sept.*hypericifolia, L.* Dry sandy fields, &c. Burlington, Tuckerman. Aug., Sept.ORDER URTICACEÆ. *The Nettle Tribe.**Urtica, Tourn.* Nettle.*pumila, L.* Shady places. July, August.§ *dioica, L.* Road sides, &c. July.*Canadensis, L.* Shady, moist woods, &c. July, August.*Parietaria, Tourn.* Pellitory.*Pennsylvanica, Muhl.* Shady rocks. Fair Haven, Robbins. Extremity of Sharpshin Point, Burlington, Macrae. July.*Boehmeria, Willd.**cylindrica, Willd.* Swamps, &c. Bellows Falls, Carey. July, Aug.*Cannabis, Tourn.* Hemp.§ *sativa, L.* Waste places. June, July.*- Humulus, L.* Hop.§ *Lupulus, L.* Borders of thickets, &c. Middlebury, Burge. Castleton, Robbins. August.*Morus, Tourn.* Mulberry.*rubra, L.* Red Mulberry. Banks of rivers, woods, &c. Pownal, Oakes. May.

ORDER AMENTACEÆ.

SUB-ORDER CUPULIFERÆ.

Carpinus, L. Hornbeam.*Americana, Michx.* Woods. May.*Ostrya, Scop.* Hop Hornbeam.*Virginica, Willd.* *Carpinus ostrya, Michx. f. t.* Iron-wood. Woods. May.

CATALOGUE OF PLANTS.

Corylus, Tourn. Hazel Nut.*Americana*, Walt. *American Hazel Nut*. Thickets, &c. April.*rostrata*, Ait. *Beaked Hazel Nut*. Shady banks, &c. April.**Fagus, Tourn. Beech.***sylvestris*, Michx. and Michx. f. t. *White Beech*. Woods. May.*ferruginea*, Ait? Michx. f. t. *Red Beech*. Woods. May.**Castanea, Gert. Chestnut.***vesca*, Gert. var. *Americana*, Michx. *Chestnut*. Woods. July.**Quercus, L. Oak.***tinctoria*, Bartram. *Black oak*. Woods. May.*rubra*, L. *Red oak*. Woods. May.*ilicifolia*, Wang. *Q. Benisteri*, Michx. *Scrub Oak*. Barren plains, &c. Bellows Falls, Carey. May.*macrocarpa*, Michx. *Over-cup White Oak*. Woods, &c. Burlington, Colchester, St. Albans, Grand Isle, South Hero, Shoreham, West Haven and Bennington, Robbins. This is perhaps *Q. elizaformis* of Dr. James' catalogue.*alba*, L. *White Oak*. Woods. May, June.*bicolor*, Willd. *Q. Prinos discolor*, Michx. fil. *Swamp White Oak*. Wet woods. May.*montana*, Willd. *Q. Prinos monticola*, Michx. f. t. *Rock Chestnut Oak*. Rocky woods. Bennington, Robbins. May.*chiapasina*, Pursh. *Dwarf Chestnut Oak*. Dry hills, &c. Pownal, Robbins. May.*coccinea*, Wangenheim. *Scarlet Oak*. Woods. May.SUB-ORDER BETULEÆ. *The Birch Tribe.***Betula, Tourn. Birch.***populifolia*, Ait. *Small White Birch*. About barren fields, woods, &c. May.*papyracea*, Ait. *Large White Birch*. *Canoe Birch*. Woods. May.*lenta*, L. *Black Birch*. *Sweet Birch*. *Cherry Birch*. Woods. May.*czedoa*, Ait. *B. lutea*, Michx. f. *Yellow Birch*. Woods. May.**Alnus, Willd. Alder.***serrulata*, Willd. *Common Alder*. Swamps, &c. April.*glauca*, Michx. f. sylv. t. Swamps, &c. April.*crispa*, Hook. *Betula Alnus crispa*, Ait. Near the summit of Camel's Hump and Mansfield mountains, Robbins. June.SUB-ORDER SALICINÆ. *The Willow Tribe.***Salix, Tourn. Willow.***candida*, Willd. Pursh. In a sphagnous swamp on the borders of Lake Bombezin, Hubbardton, Robbins. April.*Mullenbergiana*, Willd. Dry woods, &c. Bellows Falls, Carey. April, May.*pedicularis*, Pursh. Bogs and swamps. Burlington, Robbins. *Macrae*. May.*conifera*, Wang. Wet thickets, &c. April.*rostrata*, Richardson. Borders of thickets, &c. Bellows Falls, Carey. April, May.*nigra*, Marshall. Banks of streams, &c. May.*incida*, Muhl. Borders of swamps, &c. May.*cordata*, Muhl. Low wet grounds. April, May.*rigida*, Muhl. Low wet grounds, &c. Bellows Falls, Carey. April, May.*grisea*, Willd. Borders of swamps, &c. April, May.*vitellina*, L. Road sides, &c. May.*Usa-risi*, Pursh. On the summit of Mansfield Mountain, Robbins. June.**Populus, Tourn. Poplar. (According to Michaux's Sylva.)***balsamifera*, Michx. Michx. f. Sylv. t. *Balsam Poplar*. Woods and banks of rivers, &c. Pownal, Oakes. Westhaven, Robbins. April.*andicans*, Ait. Michx. f. Sylv. t. *Heart-leaved Balsam Poplar*. South Hero, Grand Isle, Cambridge, Jericho, &c., Robbins. Burlington, *Macrae*, Oakes. April.*Canadensis*, Michx. f. Sylv. t. *Cotton Wood*. *Cotton Poplar*. Banks of rivers, &c. On the Hoosic, Pownal, Oakes.*monilifera*, Ait. Michx. f. Sylv. t. *Vermont Poplar*. Banks of rivers, lakes, &c. In Orwell, Branch, Chandler. In Pownal, Brattleboro',

CATALOGUE OF PLANTS.

North Hero, South Hero, Alburgh, Johnson, and Hydepark,
Robbins. Burlington, Oakes. April.
tremuloides, Mich. Michx. f. Sylv. t. *American Aspen. Woods. April.*
grandidentata, Michx. Michx. f. Sylv. t. *Large Aspen. Woods. April, May.*

SUB-ORDER MYRICÆ. *The Gale Tribe.*

Comptonia, Banks.

asplenifolia, Ait. *Sweet Fern. Dry hills and plains. April, May.*

SUB-ORDER PLATANÆ. *The Plane Tribe.*

Platanus, L. Plane Tree.

occidentalis, L. *Button Wood. Sycamore. Banks of rivers, &c. May.*

ORDER ULMACEÆ. *The Elm Tribe.*

Ulmus, L. Elm.

Americana, L. *Common Elm. Woods, banks of rivers, &c. April.*

fulva, Michx. *Slippery Elm. Woods, banks of rivers, &c. April.*

racemosa, Thomas in Sill. Journal, 1829. *Northern Cork Elm. Moist woods, &c. Bennington and Pownal, Robbins.*

Celtis, L. Hackberry.

occidentalis, L. *Hoop Ash. Woods, &c. Burlington, Robbins. May.*

ORDER JUGLANDACEÆ. *The Walnut Tribe.*

Juglans, L. Walnut.

cinerea, L. *Butter Nut. Oil Nut. Woods, &c. May, June.*

Carya, Nuttall. Hickory. Juglans, L.

alba, Nutt. *Juglans alba*, L. *J. squamosa*, Michx. f. not *J. alba*, Willd, Bigel. *Shell-bark or Shag-bark Hickory. Woods. May, June.*

porcina, Nutt. *J. porcina*, Michx. f. Sylv. t. *J. glabra*, Muhl., Bigelow. *Pig Nut. Woods. Middlebury, James. May, June.*

amara, Nutt. *J. amara*, Michx. f. Sylv. t. *Bitter Pig Nut. Woods. Colchester, Robbins. Burlington, Carey, Macrae. May, June.*

CLASS II. GYMNOSPERMS.

ORDER CONIFERÆ. *The Fir Tribe.*

Pinus, L. Pine.

resinosa, Ait. *P. rubra*, Michx. f. Sylv. t. *Red Pine. "Norway Pine," a bad name, as it is not found in Norway. Dry barren woods. June.*

rigida. Pitch Pine. Woods, in poor soil. June.

Strobus, L. White Pine. Woods and swamps. June.

nigra, Ait. *Black or Double Spruce. Woods and swamps. May, June.*

alba, Ait. *White or Single Spruce. Woods and swamps. May, June.*

balsamea, L. *Balsam Fir. Silver Fir. Mountain woods, &c. June.*

var. Fraseri. P. Fraseri, Pursh. *Near the summits of Mansfield and Camel's Hump Mountains, Robbins, Tuckerman, and Macrae. Essex, Macrae.*

Canadensis, L. *Hemlock Spruce. Rocky woods, &c. May, June.*

pendula, Ait. *Larix Americana*, Michx. *American Larch. Hackmatack. Tamarack. Woods and swamps. May, June.*

Thuja, Tourn. Arbor Vitae.

occidentalis, L. *American Arbor Vitae. "White Cedar." In swamps and rocky woods. May.*

Juniperus, L. Juniper.

Virginiana, L. *Red Cedar. J. prostrata*, James? *Dry rocky woods, &c. May.*

communis, L. *Common Juniper. Dry rocky pastures, &c. May.*

Taxus, Tourn. Yew.

Canadensis, Willd. *American Yew. Ground Hemlock. Swamps, &c. May.*

ORDER CALLITRICHACEÆ.

Callitriche, L.

vernalis, L. *C. autumnalis*, L. *C. terrestris*, Raf. *In water, and on moist soil on the margins of ponds, &c. May—Sept.*

CATALOGUE OF PLANTS.

CLASS III. ENDOGENS OR MONOCOTYLEDONS.

ORDER IRIDACEÆ. *The Iris Tribe.*

Sisyrinchium, L. *Blue-eyed Grass.*

anceps, Cavan. Meadows. Burlington, Macrae.

var. mucronatum. Dry soil. Burlington, Macrae. Bellows Falls, Carey. June.

Iris, L.

versicolor, L. *Blue Flag.* Wet meadows, &c. July.

ORDER HYDROCHARACEÆ. *The Frog-bit Tribe.*

Udora, Nutt.

Canadensis, Nutt. *Elodea Canadensis*, Michaux. *Serpicula occidentalis*, Pursh. In water. Middlebury, James. At the mouths of Winooski river and Otter Creek, and in lake Memphremagog, Robbins. August.

Valisneria, Michx.

spiralis, L. *V. Americana*, Michx. In lakes and slow flowing water. Middlebury, James. At the mouth of Winooski river, in Castleton river, in lake Champlain near the mouth of the Lamoille, in Shoreham, and in the Connecticut at Brattleboro', Robbins, August, Sept.

ORDER ORCHIDACEÆ. *The Orchis Tribe.*

Orchis, L.

Sect. 1. *Orchis.*

spectabilis, L. Woods. May, June.

Sect. 2. *Habenaria*, Willd.

orbiculata, Pursh. Woods. Leaves flat on the ground. June, July.

Hookeriana, *Habenaria Hookeriana*, Torrey. Woods. June.

blephariglottis, Willd. "Sphagnous margin of a closely shaded pond in North Troy, Carey. Aug.

hyperborea, L. *H. Haronensis*, Spreng. Swamps, &c. Base of Mansfield mountain, and Burlington, Macrae. July.

var. dilatata. *O. dilatata*, Pursh. Swamps, &c. July.

psycodes, L. not of Bigelow, &c. *O. fimbriata*, Ait. Wet meadows, &c. July, August.

grandiflora, Bigelow. Wet meadows, &c. July.

lacera, Michx. *O. psycodes*, Willd, Big. &c., not of L. Bogs, &c. Middlebury, James. July.

ciliaris, L. Swamps, &c. Middlebury, James. Aug.

obtusata, Pursh. High mountains and sphagnous swamps at the North. In Charleston, with the *Calypso*, Carey. Brownington, Robbins. July.

viridis, Swartz. *O. bracteata*, Muhl. Woods. May, June.

tridentata, Muhl. On the east side of Mansfield mountain, Macrae. July.

flava, L. *Habenaria herbiola*, Brown. Burlington, Macrae.

Microstylis, Nutt. *Malaxis*, Swartz.

ophioglossoides, Nutt. Woods. July, August.

monophyllos, Lindl. *M. brachypoda*, Gray. *Ophrys monophyllos*, L. In Vermont, probably near Castleton, Chandler. July.

Liparis, Richard. *Malaxis*, Swartz.

liliifolia, Richard. Hills near Bellows Falls, Carey. June, July.

Laselii, Richard. *Malaxis lorreana*, Barton. Boggy soil, &c. July.

Aplectrum, Nuttall.

hyemale, Nutt. *Cymbidium hyemale*, Muhl. Woods. Middlebury, James. Near Castleton, Chandler.

Corallorhiza, Haller.

innata, R. Brown. *C. verna*, Nutt. Sphagnous swamps. May, June.

multiflora, Nutt. Pine woods, &c. August, Sept.

odontorhiza, Nutt. Woods. Bellows Falls, Carey. Sept.

Arethusa, L.

bulbosa, L. Bogs. Hubbardton, Robbins. Near Burlington, Macrae.

CATALOGUE OF PLANTS.

Pogonia, Juss.

- ophioglossoides*, R. Brown. Bogs. Near Burlington, Robbins, Macrae. July.
verticillata, Nutt. Woods. Near High Bridge, Colchester, Robbins, Oakes.
 May, June.

Triphora, Nuttall.

- pendula*, Nutt. In a dry wood of beech, birch, &c., on a hill south of Fair Haven village, Chandler. August.

Calopogon, R. Brown.

- pulchellus*, R. Brown. Bogs. July.

Spiranthes, Richard. Neottia, Swartz.

- cernua*, Richard. Moist grounds, &c. August, Sept.
gracilis, Hook. *N. gracilis*, Big. Dry woods. Colchester, Robbins. Burlington, Macrae. July.
estivalis, Rich. *Neottia estivalis*, Lam. *N. cernua*, var. *latifolia*, Torrey. Moist woods, banks of rivers, &c. Burlington, Macrae. Bellows Falls, Carey. June.

Goodyera, R. Brown.

- pubescens*, R. Brown. Woods. July, August.
repens, R. Brown. Old woods. July.

Listera, R. Brown.

- cordata*, R. Brown. On high mountains and in sphagnum swamps. Fairhaven, Chandler. Near the summit of Mansfield Mountain and Camel's Hump, Robbins, Tuckerman and Macrae. North Troy, Carey. June, July.
convallarioides, Nutt. In Charleston, with *Calypso borealis*, Carey.

Calypso, Salisbury.

- bulbosa*. *Cypripedium bulbosum*, L. *Calypso borealis*, Salisbury. In a dark sphagnum wood or swamp on the line between Charleston and Morgan, the entrance to which is opposite the house of Mr. Charles Cummings. Carey.

Cypripedium, L. Lady's Slipper.

- pubescens*, Willd. *C. parviflorum*, Ait. *Yellow Lady's-Slipper*. Dry woods and in swamps. May, June.
acaulis, Ait. *Red Lady's-Slipper*. Dry woods, and also in swamps. May, June.
spectabile, Swartz. *White Lady's-Slipper*. Swamps. June, July.
arietinum, Ait. Dry woods and sphagnum swamps. In the cedar swamp at Fair Haven, Chandler, Robbins. In Grand Isle, and in dry woods near High Bridge, Colchester, Robbins. Burlington, Carey, Macrae, and Oakes.

ORDER PONTEDERIACEÆ.

Pontederia, L.

- cordata*, L. *Pickereel-weed*. In water. July, August.

Schollera, Schreber.

- graminifolia*, Muhl. Middlebury, James. In Otter Creek near its mouth, Robbins. In Castleton River, Chandler. July, August.

ORDER MELANTHACEÆ. *The Colchicum Tribe.***Veratrum, Tourn. White Hellebore.**

- viride*, Ait. Swamps, &c. June.

ORDER TRILLIACEÆ.

Trillium, L.

- erythrocarpum*, Michx. *T. pictum*, Pursh. Woods and swamps. May.
erectum, L. Woods. May.
grandiflorum, Salis. Woods, shady banks and swamps in the west of Vermont, from Pownal to Alburgh, Robbins. May, June.
cernuum, L. Woods. Castleton, Branch, Robbins. May.

Medeola, L. Indian Cucumber.

- Virginica*, L. Woods, &c. June, July.

ORDER LILIACEÆ. *The Lily Tribe.***Lilium, L. Lily.**

- Philadelphicum*, L. *Wild Red Lily*. Pastures, &c. July.
Canadense, L. *Wild Yellow Lily*. Moist meadows. July.

CATALOGUE OF PLANTS.

Erythronium, L. *Dog's-tooth Violet*.

Americanum, Smith. Moist grounds, &c. May, June.

Allium, L. *Onion and Garlic*.

tricoccum, Ait. *Wild Onion or Leek*. Woods. July.

Convallaria, L. *Lily of the Valley*. *Solomon's Seal*.

pubescens, Willd. Woods. May, June.

bifolia, L. Woods. May.

stellata, L. Moist meadows and banks. May, June.

trifolia, L. Sphagnous swamps and bogs. May, June.

racemosa, L. Rocky woods, &c. June.

borealis, Torr. *Dracæna borealis*, Ait., not *C. umbellulata*, Michx. Woods. June.

Streptopus, Michx.

roscus, Michx. Woods, especially on mountains. May, June.

amplexifolius, var. *Americanus*, Gray. *Uvularia amplexifolia*, L. *S. distortus*, Michx. Mountain woods. On the sides of Mansfield and Camel's Hump, Robbins, Macrae, and Tuckerman. Newport and Danville, Carey. June, July.

Uvularia, L. *Bellwort*.

grandiflora, Smith. Woods. May.

sessilifolia, L. Woods. May.

ORDER ALISMACEÆ. *The Water Plantain Tribe.*

Sagittaria, L. *Arrow-head*.

sagittifolia, L. Ditches, ponds, &c. July, August.

Alisma, L.

Plantago, L. *Water Plantain*. In water. July, August.

ORDER JUNCÆ. *The Rush Tribe.*

Juncus, L. *Wood Rush*.

campestris, DC. Woods, pastures, &c. May.

pilosa, Willd. Woods and swamps. May.

melanocarpa, Desv. At the base of Mansfield Mountain, Robbins. On the Chin of Mansfield and on Camel's Hump, Macrae and Tuckerman. June, July.

Juncus, L. *Rush*.

effusus, L. Wet meadows, &c. June, July.

filiformis, L. On the summits of Camel's Hump and Mansfield Mountains, and on the shore of Lake Champlain at Ferrisburgh, Robbins. June, July.

nodosus, L. Wet meadows, &c. June.

tenuis, Willd. Low grounds, &c. June, July.

acuminatus, Michx. Margins of ponds, &c. Burlington, Macrae, Oakes.

bufonius, L. Low grounds, &c. July.

trifidus, L. On the summit of Mansfield Mountain, Robbins, and of Camel's Hump, Tuckerman and Macrae. June.

ORDER RESTIACEÆ.

Eriocaulon, L. *Pipewort*.

septangulare, With. *E. pellucidum*, Michx. Borders of ponds, generally in the water. Seymour's pond, Morgan. Minaud's pond, Rockingham, Carey. August, Sept.

ORDER SMILACEÆ. *The Smilax Tribe.*

Smilax, L.

rotundifolia, L. *Green Briar*. Woods and thickets. June.

herbacea, L. *S. peduncularis*, Muhl. Borders of woods, &c. June.

ORDER ARACEÆ. *The Arum Tribe.*

Arum, L.

Dracontium, L. *Dragon-root*. Moist grounds. Shoreham, Robbins. May, June.

triphyllum, L. *Indian Turnip*. Shady banks of swamps. May, June.

Peltandra, Rafinesque.

Virginica, Raf. *Calla Virginica*, Michx. In water on the borders of ponds and rivers. Colechester pond, Robbins. June, July.

Calla, L.

palustris, L. Swamps. Middlebury, James. Fair Haven and Whiting, Robbins. Bellows Falls, Guildhall, Carey. July.

CATALOGUE OF PLANTS.

Symplocarpus, Salisbury. *Skunk Cabbage*.

fatidus, Nutt. *Pothos fatida*, L. Wet meadows and swamps. April.

Acorus, L.

calamus, L. *Sweet Flag*. Wet meadows, &c. June.

ORDER TYPHACEÆ. *The Cat's-tail Tribe.*

Typha, Tourn. *Cat's tail*. *Reed Mace*,
latifolia, L. Ditches, pools, &c. July.

Sparganium, Tourn. *Burr Reed*.

ramosum, L. In ditches, &c. June, July.

simplex, Hudson. *S. Americanum*, Nutt. Borders of streams, &c. July.

ORDER FLUVIALES.

Najas, L.

Canadensis, Michx.

var. *fragilis*. *Caulinia fragilis*, Willd. Middlebury, James.

var. *flexilis*. *Caulinia flexilis*, Willd. In water three feet deep at the mouth of Otter Creek. Ferrisburgh, Robbins. July, Aug.

Zannichellia, Michx.

palustris, L. In shallow water, in Lake Champlain, at South Hero. Robbins.

Potamogeton, L. *Pondweed*.

natans, L. Ponds, and slow flowing waters. July, August.

heterophyllum, Schreber. Ponds, and slow streams. August.

diversifolium, Barton. Ponds, &c. In Lake Champlain at South Hero, Robbins. July.

perfoliatum, L. Ponds, &c. August.

lucens, L. Ponds, &c. August.

compressum, L. Rivers, ponds, &c. July, August.

pauciflorum, Pursh. *P. gramineum*, Michx. Ponds, &c. July, August.

pectinatum, L. Ponds, &c. July.

The species of *Potamogeton* as above are all according to Torrey's *Flora of the Northern States*, vol. I, p. 196.

ORDER JUNCAGINACEÆ. *The Arrow Grass Tribe.*

Scheuchzeria, L.

palustris, L. Sphagnous swamps and bogs. In Georgia, Chandler. At the southern end of Colchester Pond, Robbins. In North Troy, with *Orchis blephariglottis*, Carcy. June.

ORDER PISTIACEÆ. *The Duckweed Tribe.*

Lemna, L. *Duckweed*.

polyrhiza, L. Ditches, &c.

minor, L. Ditches, &c. At North Hero, Robbins.

trisulca, L. Ditches, ponds, &c. At North Hero, Robbins.

ORDER CYPERACEÆ. *The Sedge Tribe.*

Dulichium, Richard.

spathaceum, Rich. Borders of ponds, &c. July, August.

Cyperus, L.

diandrus, Torr. var. *castaneus*, Torr. Margins of ponds, &c. August.

strigosus, L. Low moist grounds. August.

repens, Elliot. *C. phymatodes*, Muhl. Wet sandy soil. In South Hero, West Haven, and on the banks of Otter Creek, Ferrisburgh, Robbins. August.

fliculmis, Vahl. *C. mariscoides*, Ell. Dry sands. August.

inflexus, Muhl. *C. uncinatus*, Pursh. Sandy shores of rivers and lakes. Aug.

Eleocharis, R. Brown. *Scirpus*, L.

palustris, R. Brown. Wet places, ditches, &c. May, June.

obtus, Schultes. *Scirpus capitatus* of American authors, not of Linnæus. Ditches and margins of ponds. June, July.

acicularis, R. Brown. Margins of ponds, &c. June.

tenuis, Schultes. Margins of ponds, &c. June.

Scirpus, L. *Club Rush*.

lacustris, L. *S. acutus*, Muhl. *Bulrush*. In water on the borders of lakes, ponds, &c. July.

CATALOGUE OF PLANTS.

- triqueter*, L. Wet places, borders of rivers, &c. July.
atrovirens, Muhl. Moist meadows, &c. July.
brunneus, Muhl. Swampy grounds. Pownal, Robbins. August.
Eriophorum, Michx. Wet meadows, ditches, &c. August.
Eriophorum, L. Cotton Grass.
alpinum, L. Bogs. Brownington, Robbins. Danville, Carey. May, June.
vaginatum, L. Bogs. June, July.
Virginicum, L. Bogs. July, August.
polystachyon, L. Bogs. May, June.
angustifolium, Reichard. *E. gracile*, Roth. Bogs. May, June.
Isolepis, R. Brown. *Scirpus*, L.
capillaris, Rœm. and Sch. Dry sands. Bellows Falls, Carey. August.
Rhynchospora, Vahl.
glomerata. Moist pastures, &c. Bellows Falls, Carey. July, August.
alba, Vahl. Swamp near Burlington, Macrae. July.
Carex, Michx. Sedge.
disperma, Dewey. Sphagnous swamps.
rosea, Schk. Woods and shady banks.
cephalophora, Muhl. Woods, &c.
sparganioides. Moist shady banks, &c.
stipata, Muhl. Wet meadows.
bromoides, Schk. Moist woods, &c.
vulpinoidea, Michx. *C. multiflora*, Muhl. Moist pastures, &c.
paniculata, var. *teretiuscula*, Wahl. Bogs.
trisperma, Dewey. Bogs and swamps.
Deweyana, Schw. Woods, &c.
tenuiflora, Wahl. Cedar and other swamps. In Salem, in a shady swamp near a small pond at the head of Lake Memphremagog, also in Burlington, Robbins. On the western side of the great cedar swamp at Fair Haven, Oakes.
stellulata, Good. *C. scirpoides*, Schk. *C. sterilis*, Willd. Wet meadows and swamps.
curta, Good. Swamps.
scoparia, Schk. Wet meadows.
var. *lagopodioides*. *C. lagopodioides*, Willd. Wet meadows.
festucacea, Schk. Moist woods and meadows.
aurea, Nutt. Moist rocky ledges, &c. Pownal, Robbins. Burlington and Colchester, Robbins, Macrae and Oakes. Bellows Falls, Carey.
saxatilis, L. Summits of Mansfield and Camel's Hump mountains, Robbins, Tuckerman and Macrae.
cespitosa, L. Wet meadows, &c.
acuta, L. Wet meadows.
crinita, Lam. Wet shady banks, &c.
leucoglochis, Ehr. *C. pauciflora*, Willd. Bogs, especially at the north, and on mountains. At Colchester pond, Robbins. At North Troy, with orchis *blephariglottis*, Carey.
polytrichoides, Muhl. Swamps, &c.
pedunculata, Muhl. Woods, &c.
squarrosa, L. In a low wet wood on the margin of Otter Creek, Ferrisburgh, Robbins.
gracillima, Schw. Wet meadows and woods. Burlington, Carey. Colchester, Macrae.
vestita, Willd. Borders of woods, &c. Middlebury, James.
Pennsylvanica, Lam. *C. varia* and *marginata*, Muhl. Woods.
Emmonsii, Dewey. *C. alpestris*, Torr. and Schw. *C. Davisii*, Dewey. Bellows Falls, Carey.
oligocarpa, Schk. Woods.
laziflora, Lam. Woods, &c. Castleton. Robbins.
granularis, Muhl. Moist shady rocks. Burlington, Oakes.
eburnea, Boott. *C. alba*, Dewey. Limestone rocks. On the rocks at High Bridge, Colchester, and at Grand Isle, South Hero, West Haven and Pownal, Robbins.
anceps, Muhl. Woods and shady banks.
plantaginea, Lam. Woods.
sylvatica, Huds. Woods, especially on mountains.

CATALOGUE OF PLANTS.

- flava*, L. Wet meadows. Sutton, *Carey*.
intumescens, Rudge. *C. folliculata* of Schk., not of Linn. Wet woods.
lupulina, Muhl. Wet meadows and woods.
tentaculata, Muhl. Wet meadows.
retrorsa, Schw. Swamps, &c.
bullata, Schk. Wet meadows, &c. South Hero, *Robbins*.
vesicaria, L. *C. ampullacea*, Dewey. *C. utriculata*, Boott. Wet meadows, &c.
lacustris, Willd. Borders of ponds, &c.
scabrata, Schw. Swamps, &c.
hystericina, Muhl. Wet meadows.
Pseudo-cyperus, L. Ditches and margins of ponds.
longirostris, Torrey. Shady ledges, &c. On the sides of Camel's Hump, and at Castleton, *Robbins*. Rocky banks of Saxton's river, near Bellows Falls, *Carey*.
limosa, L. Bogs, especially at the north.
miliacea, Muhl. Moist banks, &c.
pallenscens, L. Wet meadows, &c.
umbellata, Schk. Rocky hills, &c. Summit of Mansfield mountain, *Robbins*.

ORDER GRAMINEÆ. The Grass Tribe.

(Mostly according to Torrey's Flora of the Northern States, Vol. I.)

Agrostis, L. Bent Grass.

- § *vulgaris*, Smith. Red-top. Meadows, pastures, &c. June—Aug.
 § *alba*, L. Meadows, pastures, &c. June—Aug.
lateriflora, Michx. Moist meadows, sides of hills, &c. August, Sept.
sobolifera, Muhl. Rocky shady hills, &c. August, Sept.
tenuiflora, Willd. Rocky shady hills, &c. July, Aug.
sylvatica, Torrey. Dry rocky hills, &c. August.
canina, L.
 var. *alpina*, Oakes. *Agrostis rupestris*, Gray in Sill. Jour., vol. 42. On the summit of Camel's Hump mountain, *Robbins*, *Tuckerman* and *Macrae*. July. This variety is common on the White Mountains, and is connected with the common variety, which is abundant in Essex county, Massachusetts, by several intermediate forms, found at the base and on the sides of the White Mountains.

Cinna, L.

- arundinacea*, Willd. Wet woods, &c. August, Sept.

Polypogon, Desfontaines.

- racemosus*, Nutt. *P. glomeratus*, Willd. Wet meadows, &c. Aug., Sept.

Brachyelytrum, P. de Beauv.

- aristatum*, P. de B. *Muhlenbergia erecta*, Röth. Woods, &c. June, July.

Alopecurus, L. Fox-tail Grass.

- § *pratensis*, L. Moist meadows, &c. Bellows Falls, *Carey*. May, June.
geniculatus, L. Wet meadows, &c. June.

Phleum, L. Cat's-tail Grass.

- § *pratense*, L. Herd's Grass, Timothy. Fields, &c. July, August.

Phalaris, L. Canary Grass.

- § *canariensis*, L. Pastures, &c. Cavendish, *Macrae*. July.

Milium, L. Millet Grass.

- effusum*, L. Woods, &c. Banks of Saxton's river, Bellows Falls, *Carey*. July.
purgens, Torr. Dry rocky woods, &c. May.

Piptatherum, P. de Beauv.

- nigrum*, Torr. Shady ledges, &c. August.

Oryzopsis, Michx.

- asperifolia*, Michx. Woods, especially on mountains. May, June.

Panicum, L. Panic Grass.

- § *Crus-Galli*, L. Cultivated grounds, &c. July—Sept.
clandestinum, L. *P. pedunculatum*, Torrey. Woods. July.
latifolium, L. Sandy woods, &c. July.
dichotomum, L. *P. nitidum*, Lam. Low grounds. July.
depauperatum, Muhl. *P. rectum*, R. and S. Sandy soils. Bellows Falls, *Carey*. July.
xanthophysum, Gray. Sandy woods, &c. Burlington, *Carey*. June, July.
capillare, L. Sandy fields and cultivated grounds. August, Sept.

CATALOGUE OF PLANTS.

Setaria, P. de Beauvois.

§ *viridis*, P. de B. *Panicum viride*, L. July, August.

§ *glauca*, P. de B. *Panicum glaucum*, L. July, Aug.

Digitaria, Haller.

§ *sanguinalis*, Scop. Cultivated grounds, &c. August, Sept.

glabra. Sandy fields, &c. Castleton, Colchester, West Haven, and Ferrisburg, Robbins. August, Sept.

Paspalum, L.

ciliatifolium, Michx. Dry fields, &c. Bellows Falls, Carey. Aug.

Aristida, L.

dichotonia, Michx. Barren fields, &c. Pownal, Robbins. Aug.

Calamagrostis, Roth. *Arundo*, L.

Canadensis, P. de Beauv. *Arundo Canadensis*, Michx. *Calamagrostis Mexicana*, Nutt. Wet meadows, &c. July.

Anthoxanthum, L. *Sweet-scented Vernal Grass*.

§ *odoratum*, L. Meadows and pastures. Middlebury, James. May, June.

Aira, L. *Hair Grass*.

flexuosa, L. Dry rocky woods. June.

cespitosa, L. *Aira aristulata*, Torrey. On the moist rocky banks of rivers. On the Connecticut, at Guildhall, Robbins. July.

Trisetum, Pers.

striatum, Michx. *T. purpurascens*, Torrey. *Avena striata*, Michx. Rocky woods. Castleton, Georgia, and Woodstock, Robbins. May, June.

molle, Trinius. *Avena mollis*, Michx. On dry limestone rocks, at High Bridge and Winooski falls, Colchester, Robbins. June.

Hierochloa, Gmelin.

alpina, Roem. and Sch. On the summit of Mansfield mountain, Tuckerman and Macrae. July.

Arundo, L. *Reed Grass*.

Phragmites, L. In water on the borders of ponds, &c. In lake Memphremagog, Robbins. Aug.

Danthonia, DC.

spicata, P. de B. Dry barren woods, pastures, &c. June, July.

Festuca, L. *Fescue Grass*.

§ *duriuscula*, L. Dry pastures, &c. June.

tenella, Willd. Dry sandy fields, &c. Bellows Falls, Carey. June, July.

§ *elatior*, L. Grass fields, &c. Middlebury, James. June.

§ *pratensis*, Huds. Grass fields, &c. Bellows Falls, Carey. June, July.

Glyceria, R. Brown.

fluitans, R. Br. Stagnant water, Burlington, Carey. June.

Poa, L. *Meadow Grass*.

§ *annua*, L. Cultivated grounds, &c. May—Aug.

dentata, Torrey. Ditches and wet places. July, Aug.

aquatica, L. Wet meadows, &c. July, Aug.

§ *pratensis*, L. Grass fields, roadsides, &c. June, July.

compressa, L. Sandy fields, and in woods, &c. June.

serotina, Ehrh. Wet meadows. July.

nemoralis, L. Woods. May, June.

nervata, L. Wet meadows. June, July.

obtus, Muhl. Wet meadows, &c. Bellows Falls, Carey. Aug.

Torreyana, Sprengel. *P. elongata*, Torr. not of Willd. Woods. At the base of Mansfield mountain, Robbins. Morgan, near the line of Charleston, Carey. Burlington, Macrae. July.

Canadensis, Torr. *Briza Can.*, Michx. Wet meadows and swamps. July.

hirsuta, Michx. Sandy and gravelly beach of Connecticut river, at Bellows Falls, Carey.

alpina, L. Summit of Mansfield mountain, Robbins. July.

repens, Michx. Wet sandy shores of rivers and lakes. On the banks of the Otter Creek, Ferrisburgh, and of the Winooski, Colchester, Robbins. July, Aug.

Tricuspis, P. de Beauv.

seslerioides, Torr. *Poa quinquefida*, Pursh. Sandy soil Middlebury, James. Aug.

Dactylis, L. *Orchard Grass*.

§ *glomerata*, L. Grass fields, &c. Bellows Falls, Carey. June.

CATALOGUE OF PLANTS.

- Bromus*, L. *Brome Grass*.
 § *secalinus*, L. *Chess or Cheat*. Cultivated grounds. July.
ciliatus, L. Woods, &c. July.
purgans, L. Woods, shady banks, &c. Castleton and Brattleboro', *Robbins*.
Secale, L. *Rye*.
 § *cereale*, L. Old fields and on rocks, &c. June.
Elymus, L. *Lyme Grass*.
Canadensis, L. and *var. glaucifolius*. Rocky river banks, &c. July, Aug.
striatus, Willd. *E. villosus*, Torrey, Flora. Dry rocky banks, &c. Middlebury, James. July, Aug.
Hystrix, L. Rocky woods. Middlebury, James. West Haven, *Robbins*.
Triticum, L. *Wheat*.
 § *repens*, L. *Couch Grass*. "*Witch Grass*." Cultivated grounds, &c. June, July.
Spartina, L. *Cord Grass*.
cynosuroides, Willd. Banks of rivers, &c. Bellows Falls, *Carey*. Aug.
Andropogon, L. *Beard Grass*.
scoparius, Michx. Dry fields, &c. Pownal, *Robbins*. Bellows Falls, *Carey*.
 Burlington, *Macrae*. August, Sept.
furcatus, Muhl. Dry rocks and fields. Colchester, *Robbins*. Bellows Falls, *Carey*. Aug. Sept.
nutans, L. Dry fields, &c. Pownal and Brattleboro', *Robbins*. Bellows Falls, *Carey*. Aug. Sept.
Leersia, Solander.
Virginica, Willd. Wet woods, &c. Aug.
oryzoides, Swartz. Ditches, &c. Aug. Sept.
Zizania, L. *Wild rice*.
aquatica, Lambert. In shallow water in rivers and lakes. Burlington and S. Hero, *Robbins*. Aug.

CLASS IV. ACROGENS.

ORDER EUISETACEÆ. *The Horsetail Tribe.*

- Equisetum*, Tourn. *Horsetail*.
limosum, L. Bogs, borders of ponds, &c. June.
sylvaticum, L. Moist woods and shady banks. May.
hyemale, L. Wet woods and banks. June.
variagatum, Schleich. Interstices of rocks on the shores of the Connecticut river, near low water mark, Bellows Falls, *Carey*.
scirpoides, Michx. Moist woods and banks. June.

ORDER FILICES. *The Fern Tribe.*

- Polypodium*, L.
vulgare, L. Shady rocks, &c.
Dryopteris, L. Woods and swamps.
Phegopteris, L. Woods and shady banks.
var. connectile. *P. connectile*, Michx.
var. hexagonopterum. *P. hexagonopterum*, Michx.
Aspidium, Swartz. *Shield Fern*.
acrostichoides, Swartz. Rocky woods, &c.
Goldianum, Hooker. Woods. In Orleans county, *Carey*.
Thelypteris, Swartz. *A. noveboracense*, Willd. Moist woods.
cristatum, Willd. Moist woods near Burlington, *Macrae*.
marginale, Sw. Rocky woods.
dilatatum, Sw. Woods.
aculeatum, Sw. Woods about the "Notch" at north base of Mansfield mountain. *Macrae* and *Tuckerman*.
Cistopteris, *Bernhardi*.
fragilis, Bernh. *Aspidium tenue*, Sw. Moist rocks, &c.
bulbifera, Bernh. *Aspid. bulb.* Willd. Shady rocks, generally on limestone.
Dicksonia, *L'Heritier*.
pilosiuscula, Willd. Moist pastures, shady woods, &c.
Woodsia, *R. Brown*.
ilvensis, R. Br. On rocks. Fairhaven, &c., *Robbins*. On the summit of Mansfield mountain, *Tuckerman* and *Macrae*.

CATALOGUE OF PLANTS.

- obtusum*, Torr. *Aspid. obtusum*, Swartz. *W. Perriniana*, Hooker and Greville. Rocks. Bellows Falls, Carey.
- Asplenium**, L. *Spleenwort*.
rhizophyllum, L. Shady limestone rocks.
angustifolium, Michx. Woods. Middlebury, James.
ebeneum, Ait. Rocky ledges.
Trichomanes, L. Steep rocky ledges.
thelypteroides, Michx. Woods and shady banks. Bellows Falls, Carey. In Colchester, on the eastern side of High Bridge, Oakes. Ludlow, Washburn.
- Ruta muraria*, L. *Wall rue Spleenwort*. In the crevices of limestone rocks, facing the woollen factory at Winooski falls, near Burlington, Robbins and Macrae. At the place of the former bridge, near High Bridge, Colchester, also at Pownal and West Haven, Robbins.
- Felix-femina*, Bernh. *Aspidium Felix-femina*, Sw. *Aspidium asplenoides*, Sw. *A. angustum*, Willd. Woods.
- Woodwardia**, Smith.
Virginica, Sw. Bogs. At Colchester pond, Robbins.
- Pteris**, L. *Brake*.
aquilina, L. *Common Brake*. Dry woods, &c.
atropurpurea, L. Crevices of Limestone rocks. Near High Bridge and at Winooski falls, and at Pownal and West Haven, Robbins.
gracilis, Michx. On rocks overhanging the "Devil's Den," Burlington, Macrae.
- Adiantum**, Tourn. *Maidenhair*.
pedatum, L. Woods.
- Struthiopteris**, Willd.
Germanica, Willd. Woods, and low grounds.
- Onoclea**, L.
sensibilis, L. Moist woods and banks.
- Ophioglossum**, L. *Adders' Tongue*.
vulgatum, L. Bellows Falls, Carey.
- Osmunda**, L. *Flowering Fern*.
Claytoniana, L. *O. interrupta*, Michx. Moist grounds, &c.
cinnamomea, L. Moist grounds, &c.
regalis, L. *O. spectabilis*, Willd. Moist grounds, &c.
- Botrychium**, Swartz. *Moonwort*.
fumarioides, Willd. Pastures, &c.
var. dissectum, Oakes. *B. dissectum*, Muhl. Rockingham, Carey.
Virginianum, Sw. *B. gracile*, Michx. Woods.
simplex, Hitchcock. At Sutton, near the village, on the road leading to Burke, Carey.

ORDER LYCOPODIACEÆ. *The Club-Moss Tribe.*

- Lycopodium**, L. *Club-Moss. Winter-green*.
clavatum, L. Dry woods.
complanatum, L. Woods.
obscurum, L. *L. dendroideum*, Michx. *Ground Pine*. Woods.
annotinum, L. Woods, especially near the mountains.
rupestre, L. On dry rocks. Georgia, Robbins. Fair Haven, Chandler.
selego, L. Summits of Mansfield and Camel's Hump mountains, Robbins, Tuckerman and Macrae.
lucidulum, Michx. Woods.

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*. Having been obliged, contrary to expectation, to work off the preceding Catalogue without awaiting the return of the proof sheets from the author, some typographical errors, &c., have occurred, for the correction of which see the Errata at the end of the volume.

BASSWOOD.

BLACK CHERRY.

SUGAR MAPLE.

SECTION II.

Trees and Fruits.

To the preceding full, and very perfect catalogue of Vermont Plants, kindly furnished for this work by Wm. Oakes, Esq., of Ipswich, Massachusetts, we here subjoin a brief account of our most important Forest Trees, a list of which has already been given on page 173, and also a few words respecting our Shade Trees, Fruits, &c., which is all our limits will admit.



BASSWOOD, OR LIME TREE.

Tilia Americana.

This tree is found in all parts of the state, and under favorable circumstances grows to the height of 70 or 80 feet with a proportional diameter. In newly cleared lands the stumps and large roots of the basswood are apt to send forth shoots which grow with great rapidity. To prevent the growth of these the bark is sometimes stripped from the stumps, or they are seared by building a fire around them. The inner bark of this tree is sometimes macerated in water and formed into ropes. The wood is white and tender, but is valuable for very many purposes. It is sawed into planks and boards, and is used for chair seats, trunks, and in the manufacture of a variety of other articles.



BLACK CHERRY.

Cerasus serotina.

This is our largest species of cherry tree, and sometimes, though rarely, exceeds 50 feet in height and 15 inches in diameter. It is scattered, but very sparingly, over the greater part of the state. It is sometimes called *Wild Cherry*; and also *Cabinet Cherry*, from the use made of it by cabinet makers. But it is more generally called *Black Cherry*, and this name may be derived either from the color of the bark or the ripe fruit. The perfect wood is of a dull light red color, which deepens with age. It is compact, fine grained, brilliant, and not liable to warp when perfectly seasoned. It is extensively used for almost all species of furniture,

and sometimes rivals mahogany in beauty, but it has been sought for with so much eagerness, that there is very little now remaining in our forests large enough to be sawn into boards. The bark of this tree is aromatic, has an agreeable bitter taste, and is often used as a tonic.



THE SUGAR MAPLE.

Acer saccharinum.

The Sugar Maple is one of our most common and valuable forest trees. It grows to a larger size than any other species of maple, and its wood, when seasoned, is much heavier and harder. Hence it is often called *Rock Maple* or *Hard Maple*. Its ordinary height is about 60 feet, with a diameter of from 2 to 3 feet. The wood, when first cut, is white, but by exposure assumes a rosy tinge. Its grain is fine and close, and when polished has a silky lustre. It is strong and heavy, but when exposed to moisture soon decays, on which account it is little used either in civil or naval architecture. When thoroughly seasoned it is used by wheelwrights for axletrees and by sleigh makers for the runners of common sleds. It is also used by chair makers and cabinet makers in many kinds of their work. The wood of this tree exhibits two accidental forms of arrangement of the fibre, of which cabinet makers take advantage for manufacturing beautiful articles of furniture. The first consists of undulations, forming what is called *Curled Maple*. The second, which occurs only in old trees, appears to arise from an inflection of the fibre from the circumference towards the centre, producing spots, which are sometimes contiguous, and at others a little distance apart. This is what is called *Bird's-Eye Maple*, and the more numerous the spots, the more beautiful and more esteemed is the wood. Like the curled and striped maple, it is used for inlaying mahogany. It is also made into bedsteads, portable writing desks, and a variety of other articles, for which purposes it is highly valued. The sugar maple is the most valuable wood for fuel found in the state. Its ashes are very abundant and rich in alkali. Its charcoal is of the most valuable kind. Its wood may easily be distinguish-

THE MAPLES.

THE MAPLES

ed from the other kinds of maple by its weight and hardness. Valuable as this tree is on account of its wood, and for being one of our most beautiful and flourishing ornamental shade trees, its value is greatly increased on account of the sugar extracted from it. When the country was new, nearly all the sweetening consumed in the state was obtained from the sugar maple, and although the proportional quantity has been diminished by the destruction of the maple forests, our people have become so sensible of its value, both for fuel and for its sugar, that they are taking much pains to preserve groves of the second growth. It is a tree which grows rapidly, and considerable quantities of sugar are now made from trees which sprung from the seed since the settlement of the state was commenced. The quantity of sugar manufactured in the state in 1840, was 4,647,934 lbs.

The quality of the sugar made in the state is very unequal. While some of it is black, dirty and disagreeable, there is much made which is no wise inferior in color or flavor to the very best West India sugar; and this depends entirely upon the manner and care with which it is manufactured. The dark color, the clamminess and disagreeable taste of much of our maple sugar, are owing chiefly to three causes. 1. The neglect to scald the buckets, &c., used for catching the sap, and to keep the sap clear from all impurities. 2. Allowing the kettles to become so much heated at the top as to cause the syrup to burn upon them, and afterwards to be dissolved and mingled with the syrup. 3. Allowing syrup to remain too long in iron kettles. It should in no case be allowed to stand in the kettle over night. If these causes be guarded against and the syrup be well settled, well cleansed, and done down without being burnt, there can be no failure of having good sugar. To make white coarse grained sugar, it should be done so that only about three fourths of it will grain. It should then be poured into a tub, and remain unstirred till the graining has ceased. The molasses should then be drained or poured off, and the sugar will be found to be very beautiful. It may be still further whitened by spreading upon the sugar a clean white cloth, and covering it for a few days with moist dough, made of Indian meal. The sugar made from this tree, in addition to its excellent qualities, has two important recommendation. It is the production of our own state, and it is never tinged with the sweat, and the groans, and the tears, and the blood of the poor slave.



THE WHITE MAPLE.

Acer dasycarpum.

This tree so nearly resembles the Red Maple, that it is very generally confounded with it in Vermont, both being called Soft Maple. The name of White Maple may be derived either from the leaf or from the wood. The color of the under side of the leaf is a beautiful silvery white, and the wood is also very white, and of a fine texture; but it is softer and lighter than either of the other species of maple. It is sometimes used in the manufacture of furniture, for inlaying mahogany, cherry and walnut, but it is liable to change its color. Wooden bowls are sometimes made of it, but ash and poplar are preferable when they can be had. Sugar is sometimes made from the sap of this and the Red Maple, but the same quantity of sap does not yield more than half as much sugar as that of the sugar maple. Like the Red Maple, the extract from the inner bark of this tree produces a black preceptale with copperas, and is sometimes used for coloring.



THE RED MAPLE.

Acer rubrum.

This tree is found in most parts of the state, but in no part is so plentiful as the Sugar Maple. Its flowers appear in April, long before the leaves, and are the first indications which the forests exhibit of the returning spring. They are small, of a deep red color, and hence the name, *Red Flowering Maple*. This tree is most common in low moist lands, and on the banks of streams and ponds, but is sometimes met with at considerable elevations on our hills and mountains. Its usual height is about 50 feet, with a diameter from 20 to 30 inches. The wood is lighter and more porous than that of the sugar maple, but when seasoned under shelter it makes excellent fuel, and is valuable for various other purposes. It is easily wrought in the lathe, and is much us-

THE ASHES.

SASSAFRAS.

SOUR GUM.

ed for yokes, the handles of agricultural implements, wooden dishes and other domestic wares. In old trees, the grain is sometimes undulated constituting as in preceding species, what is called *Curled Maple*. This is wrought into various articles of furniture, which for richness and lustre, often equals the finest mahogany. It is also used for the stocks of guns. From the inner bark of this tree an extract of a purple color is obtained, which is darkened by the addition of a little copperas or alum and sometimes used for writing ink, and also for dying black.



WHITE ASH.

Fraxinus acuminata.

This tree is thinly scattered over nearly the whole state, and seems to delight in cool situations. It is most frequently met with near the banks of streams, and on the acclivities surrounding ponds and swamps. In these situations it frequently attains the height of 70 or 80 feet, with a diameter of from two to three feet. It is universally known by the name of *White Ash*, and this name may be derived either from the color of the bark, the sapwood, or the under surface of the leaves, all of which are white. By the light color of the bark it is readily distinguished from the other species. The wood of this tree is highly esteemed for its strength, suppleness, and elasticity, and is applied with advantage to a great variety of uses. It is always selected by carriage makers for fells or shafts, the felloes of wheels, and the frames of carriage bodies. It is also used for chairs, scythe snaths and rake handles; for hoops, sieves, boxes, wooden bowls, and a variety of other domestic wares; also for the staves of casks, blocks for pulleys, and on account of its strength and elasticity, it is considered superior to any other kind of wood for cars.

RED ASH.

Fraxinus pubescens.

The Red Ash is a handsome tree which grows to the height of about 60 feet. The bark on the trunk is of a deep brown color, and the wood differs from that of the White Ash in being redder, but it

possesses most of the other properties of the White Ash, and is, in general, applied to the same purposes.



BLACK ASH.

Fraxinus sambucifolia.

The Black Ash requires a moister soil than the White Ash, and is commonly found growing on low lands, and in and about swamps; and hence it is sometimes called *Swamp Ash*. The perfect wood is of a brownish complexion, and by mulling may be separated into thin narrow strips, which are employed for bottoming chairs, making baskets, riddles, &c. The saplings of this tree are much used for hoop-poles.



SASSAFRAS.

Laurus sassafras.

This interesting and valuable tree is found, but sparingly, in the southwestern parts of the state, and this seems to be its most northern limit. On account of its small size and scarcity, little account is made of the wood, but it is highly valued for its medicinal properties. For more than 200 years it has maintained its reputation as an excellent sudorific, and it is employed to advantage in cutaneous affections and chronic rheumatism. The bark of the roots contains the greatest quantity of the peculiar extract of this tree. The dried leaves and young branches contain a large amount of mucilage.

THE TUPELO, OR SOUR GUM.

Nyssa multiflora.

This tree, which is here usually called *Peppertree*, is found sparsely scattered through the southern and western parts of the state, but no where in large quantities. It grows to the height of near 50 feet, with a diameter of 15 or 20 inches. The limbs usually descend low upon the trunk, which continues of nearly uniform

RED MULBERRY.

IRON WOOD.

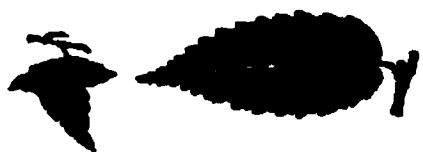
WHITE BEECH.

size for some distance. The wood of this tree holds a middle place between the hard and soft wood trees. The most remarkable peculiarity of this tree consists in the arrangement of its woody fibres, which are so united into bundles and twisted and braided together, that it is nearly impossible to split it. Hence it is often employed for the naves of wheels, and other articles, which are liable to split when made of common materials.

THE RED MULBERRY.

Morus rubra.

Vermont is near the northern limit of the growth of this tree, and here it grows very sparingly. At the south it is said to attain the height of 60 or 70 feet, and the wood is employed for many useful purposes, but here neither its size nor its numbers render it of much consequence.



HORNBEAM, OR BLUE BEECH.

Carpinus Americana.

This tree is not common excepting in the western part of the state, where it is generally known by the name of *Blue Beech*. It seldom exceeds twenty feet in height or 4 or 5 inches in diameter. The bark is smooth and undivided, and sets very close to the wood, the surface of which is usually irregularly furrowed. The wood is white, compact and fine grained, but the tree is so small and rare that little account is made of it.



IRON WOOD.

Ostrya Virginica.

The body of this tree, while small, is much used for levers in rolling logs, and hence it is frequently called *Lever Wood*. It is also called *Hop-Hornbeam*, from the resemblance of the fruit to that of the hop. The growth of this tree is very slow, as may be seen by the great number of concentric annual layers contained in a tree of only a few inches in diameter. It nev-

er constitutes the principal part of the forest, but is thinly scattered among the other trees in almost all parts of the state. It seldom exceeds 40 feet in height or 10 inches in diameter. The wood is white, compact, fine grained, and very heavy. It is used for making the cogs of wheels, for mallets, and for various other purposes. When seasoned it makes the very best of fuel, but its slow growth and limited quantity prevents its being an object of much regard.



RED BEECH.

Fagus ferruginea.

The Red Beech is found in all parts of the state, and in some places is so much multiplied as to form almost entire forests of considerable extent. Its usual height when full grown is from 60 to 70 feet, with a diameter of 2 or 2½ feet. The wood is valuable for fuel and in the arts. That of the second growth in open lands is strong, compact, fine grained and heavy. As it is not liable to warp when well seasoned, it is very suitable for the backs of cards, and is generally chosen for that purpose. It is also used for shoe lasts, for the wood of joiners' planes and other tools, and for the handles of various kinds of instruments. For fuel it is but little inferior to the sugar maple, if it be seasoned and kept under shelter from rains and moisture, but if exposed it is soon injured, and the sap wood soon rots. The fruit of this tree is usually abundant, and as swine eat it with avidity the early settlers of the state relied much upon beech-nuts for fattening their hogs. As beech-nuts are injured by the fall rains, those which are designed for preservation should be gathered as soon as ripe, and should be thinly spread in a dry place till they are thoroughly seasoned. They are often eaten, but are not very highly esteemed. A rich oil may be extracted from the nut.

THE WHITE BEECH.

Fagus sylvestris.

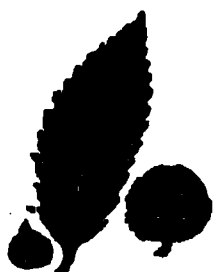
The two kinds of Beech are distinguished chiefly by their wood and durability. In the White Beech the greater part of the tree is sap-wood and very per-

THE CHESTNUT.

THE OAKS.

THE LARGE WHITE BIRCH.

ishable, while in the Red Beech the sap wood is thin, and the heart, or perfect wood exceedingly compact and durable. The White Beech also grows to a greater height, and its trunk is freer from limbs than that of the Red Beech.



CHESTNUT.

Castanea vesca, var. Americana.

The Chestnut in Vermont is confined mostly to the south western parts, and to the towns lying along the bank of Connecticut river in the counties of Windham and Windsor. The basis of the soil in which it there flourishes is an argillaceous slate. According to the journal of Samuel Champlain, he found this tree growing on the shore of the lake which bears his name, in 1609. The wood is durable, and where it exists in sufficient quantities, it is used for posts and rails for fences, for shingles, and for staves of dry casks. For posts, trees from six to ten inches in diameter are employed, and they are generally charred on their surface before they are set in the ground. Chestnut rails are said to last more than 50 years. The wood being filled with air snaps as it burns, and on that account is not much esteemed for fuel; but coal made of it is excellent.



THE WHITE OAK.

Quercus alba.

The growth of the White Oak is confined principally to the southern and western parts of the state, and even there was never very much multiplied. The original growth sometimes attained the height of 70 feet, with a diameter of three or four feet, but the old trees have been nearly all cut down, and only a second growth, which has sprung up since the country was settled, now remains. The wood of this tree is more valuable than that of any other of the American oaks. It is of a reddish white color, and is very strong and durable. When perfectly seasoned it is much used by carriage makers,

and is preferred to any other wood for the frames of coaches, waggons, and sleighs, and also for the felloes, spokes and naves of wheels. The wood of the stocks of young trees is very tough and elastic, and is susceptible of minute division; and hence it is much used for baskets, the hoops of sieves, and for whip, pail and axe handles. It also makes the best of staves for casks, and is the most valuable wood for ship-building. The bark of the White Oak is much used in medicine on account of its astringent properties. It is taken internally in the form of a decoction, or powder, for intermittent fevers, and is applied externally to wounds and ulcers as a styptic and antiseptic. Inhaled in the form of an impalpable powder, it is said to cure the phthisic in its advanced stages. For medical purposes the inner bark on small branches is to be chosen.



RED OAK.

Quercus rubra.

This oak, though not very abundant in Vermont, is more plentiful and widely diffused in the state than the preceding species. The wood is reddish and very coarse grained, and is of little value compared with that of the White Oak. It is used principally for staves and heads of casks. The bark is used in tanning leather.

The other species of oak, mentioned on pages 173 and 174, are found in Vermont only in small quantities.

LARGE WHITE BIRCH.

Betula papyracea.

This tree is quite common, and often attains the height of 60 or 70 feet. It is often called *Canoe Birch*, from the circumstance of its bark often being employed by the Indians in the construction of canoes. They also manufacture the bark into baskets and boxes. Divided into thin sheets it has been used as a substitute for paper. In new settlements large plates of the bark of this tree were sometimes used for covering the roofs of houses. The wood of this tree is lighter, when seasoned, and less valuable than that of the Yellow Birch and Black Birch.

THE BIRCHES.

BUTTONWOOD.

WHITE ELM.

THE BLACK, or CHERRY BIRCH.

Betula lenta.

This tree is called Cherry Birch, from its resemblance to the wild cherry. It is also sometimes called *Sweet Birch*, or *Spice Birch*, on account of its agreeable aromatic smell and taste. It grows best in a deep loose soil, and sometimes reaches the height of 80 feet, with a diameter, at the bottom, of more than three feet. It is not so abundant as the following species, but the wood is more highly valued by the cabinet makers, being finer grained and susceptible of a higher polish. When freshly cut the wood has a light rosy hue, which deepens by exposure to the light. It is much used in the manufacture of bedsteads, tables, sofas, armed chairs, and a variety of other articles, and with age assumes very much the appearance of mahogany.



THE YELLOW BIRCH.

Betula exelma.

The Yellow Birch is common in all parts of the state, generally preferring a rich moist soil. It ranks as one of our largest trees, often attaining the height of 70 or 80 feet, with a diameter of three or four feet. It is remarkable for the color and arrangement of its epidermis or outer bark, which is of a golden yellow color, and which frequently divides itself into narrow strips, rolled backwards at the ends and attached in the middle, giving to the tree a ragged appearance. The bark and young shoots have an agreeable aromatic odor and spicy taste. The wood of this tree is very valuable. It ranks next to the sugar maple in excellence as an article of fuel, and is used for various other purposes. It is sawed into joists, planks and boards, and is used by the cabinet maker for bedsteads, tables, and numerous other articles of household furniture. It is also made into yokes for oxen, and ox-sleds. The saplings are used for hoop-poles, and from these most of the brooms were made which were used by the early settlers. The bark is used in tanning leather. Russia leather is said to owe its peculiar odor, and its power of resisting moisture and the attack of worms and insects, to an oil used in currying, which is extracted from the paper-like bark of the birch. Hence its value for book-binding. The oil is obtained by heating the bark in closed earthen or iron vessels.



BUTTONWOOD, or SYCAMORE.

Platanus occidentalis.

The Buttonwood is usually found growing along the banks of streams and margins of lakes and ponds, and, although, in Vermont, it does not, in magnitude, exceed some other trees, it is said in some parts of our country to grow to a greater size than any other tree in the United States. We have accounts of button wood trees in the western part of the state of New York and on the Ohio river, measuring more than 40 feet in circumference at the height of five feet from the ground. This tree, though generally known by the name of Buttonwood in New England, is called in other places by various other names. In Virginia it is sometimes called *Water Beech*. At the west it is frequently called *Sycamore*, or *Plans Tree*, and in Louisiana and Canada it bears the name of *Cotton Tree*. The wood of this tree in seasoning, becomes of a dull red color, and is susceptible of a bright polish. It is but little used by cabinet makers, in the form of boards, on account of its liability to warp, but it answers well for bedsteads, and requires only to be polished and varnished, without paint, to make a very neat article.



WHITE ELM.

Ulmus Americana.

With the exception of the white pine, we have no tree which grows to a greater size, or which appears more graceful and majestic than the White Elm. This tree is found, though not very plentifully, in all parts of the state, and is sometimes seen towering to the height of 100 feet, with a diameter at the base of more than 4 feet. The wood is of a dark brown color, and is wrought for several valuable purposes. It is often sawed into planks, and has been considerably used for the naves of wheels. During a part of the year the bark of this tree is very easily detached, and this, after being soaked in

THE SLIPPERY ELM.

THE BUTTERNUT.—THE HICKORY.

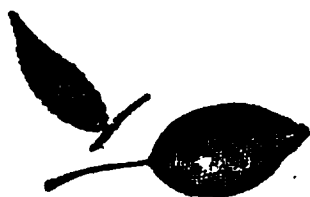
THE NORWAY PINE.

water and rendered supple by pounding, was formerly much used for bottoming common chairs. For fuel, the elm is inferior to several other kinds of wood, but its ashes are strongly impregnated with alkali, and no wood yields a greater quantity. The young of the elm is much admired, and much employed as a shade tree around our yards and dwellings, and seems to be preferable to the locust, inasmuch as it thrives in all parts of the state, and is not, like the locust, liable to be destroyed by the Borer.

RED, OR SLIPPERY ELM.

Ulmus fulva.

This tree, though found in most parts of the state, is less abundant than the preceding species, and of less magnitude, seldom exceeding 60 feet in height, with a diameter of 2 feet. The wood is of a reddish color, and is less compact than that of the white elm. It makes excellent and durable rails, into which it is easily split, but this last property renders it unsuitable for the naves of wheels. It is, however, said to answer a good purpose for the blocks of pullies. The inner bark of this tree is an important article of *materia medica*. Macerated in water it yields a thick and abundant mucilage, which makes a refreshing drink much used in colds, coughs and fevers. The bark, when dried and reduced to flour, is said to make excellent puddings.



BUTTERNUT.

Juglans cinerea.

The Butternut is common in most parts of the state, and is known in some places by the name of Oil-nut, which it derives from the oily nature of its fruit. It thrives best on a dark cold soil, and often measures three or four feet in diameter, although it seldom exceeds 60 feet in height. The roots of the Butternut usually extend horizontally, with little variation in size, and but a few inches below the surface of the ground, often to the distance of 30 feet or more, which makes it a troublesome tree, when growing upon or adjacent to lands designed for tillage. The wood of this tree is light, and of a reddish color, and, though it has little strength, it possesses, in a good degree, the property of durability. The timber is little used for frames of buildings, but is

sometimes sawed into boards and clapboards. It is also used for posts in fences, for corn shovels, wooden dishes, troughs for catching the sap of the sugar maple, and for panels for coaches and chaises. For all these purposes it answers well, as it is not liable to split, and receives paint in a superior manner. The extract of the bark of this tree is used for a cathartic. Its operation is said to be sure, and unattended, in the most delicate constitutions, with pain or irritation.



SHELLBARK HICKORY.

Carya squamosa.

This tree, though no where greatly multiplied, is by no means uncommon, particularly in the neighborhood of lake Champlain. It is usually found on moist lands, and often about swamps and in places which are liable to be inundated in high water. The wood possesses the characteristic properties of the hickories generally, being very elastic and tenacious. It also possesses their common defect of soon decaying and being very liable to be eaten by worms. The wood is straight grained and easily split, and, being also easily wrought when green, is made into ax handles and whip-handles, which are much esteemed on account of their smoothness, suppleness and strength.



THE NORWAY PINE.

Pinus resinosa.

The Norway Pine, though originally plentiful in some places in Vermont, was never so abundant as the following species, and, though a large and lofty tree, does not equal the white pine in size and height, seldom exceeding 3 feet in diameter or 80 feet in height. This tree is often called *Red Pine* and sometimes *Yellow Pine* from the color of its bark. The wood is fine-grained, compact, and on account of the resin it contains much heavier than that of the white pine, and for many pur-

THE PINES.

poses is more valuable. It is employed in architecture in various ways and is much esteemed for floors in dwelling houses. It is becoming scarce. Leaves in twos.



THE WHITE PINE.

Pinus strobus.

The white pine is much the most lofty tree which grows in our forests and the most valuable for its timber. Dr. Williams states the height of this tree to be 247 feet,* but it is probable that a very few only have obtained that height in Vermont. The tallest trees which have fallen under our own observation have not exceeded 170 feet. While the pine forests were standing, trees measuring from 140 to 180 feet were not uncommon, and they have often measured more than 6 feet in diameter at the base.

This species of pine was originally very abundant in all the western parts of the state, particularly in the neighborhood of Lake Champlain, and was found in considerable quantities along the bank of the Connecticut and most of our smaller rivers. But in consequence of the indiscriminate havoc of our forest trees by the early settlers, and of the common use of this tree for timber, boards and shingles for buildings and other domestic uses, together with the great demand for it, for exportation, our forests of white pine have mostly disappeared, and boards and shingles of good quality are becoming scarce and difficult to be obtained. The leaves are in fives.

THE PITCH PINE.

Pinus rigida.

This pine is always found upon light sandy lands and seldom exceeds 50 or 60 feet in height. It is remarkable for the great number of its limbs, which usually occupy two thirds of the trunk and render the wood extremely knotty. A large proportion of the trunk consists of sap wood, and for architectural purposes it is much less valuable than either of the preced-

* Hist. Vt. Vol. 1. p. 87. The author of Memoirs of Dr. Wheelock, late president of Dartmouth College, states that he measured a white pine which grew on the plain where that College now stands, and found it 270 feet from the butt to the top. Memoirs p. 56.

THE SPRUCES.

ing species. When sufficiently free from knots it makes firm and durable floors, and for fuel it is much esteemed by bakers and by glass and brick-makers. From the knots and resinous stocks of this tree lamp black is manufactured. The leaves are in threes.



DOUBLE SPRUCE.

Pinus nigra.

This tree is found in all parts of Vermont, and is so greatly multiplied on many of our hills and mountains, as to constitute almost entire forests of considerable extent. The usual height of this tree is from 60 to 80 feet, with a diameter of from 1½ to 2 feet. It seems to prefer a cool gravelly or sandy soil, and is most common upon northern or northwestern declivities. It is found, though of diminutive size, on the very summits of our mountains, and to this tree, more than any other, are we indebted for the name of our state, *Verd-Mont*, it being the most plentiful evergreen upon our mountains. The wood of the Double Spruce is distinguished for strength, lightness and elasticity, and is extensively used for frames of houses and other buildings. It is also sawed into boards and clapboards, which, though harder to plane and more liable to split in nailing, are, for many purposes, little inferior to pine, and for some purposes are preferred. It likewise makes good shingles. In the interior parts of the state houses, barns and other buildings are very often made entirely of spruce. The young branches of this tree, boiled in water, and the decoction sweetened with molasses or maple sugar, makes what is called *spruce beer*, which is said, in long sea voyages, to be a sure preventive of the scurvy. The wood is not of much value for fuel. It contains little resin, except what exudes and forms concretions in the seams of the bark, and is called *spruce gum*.

SINGLE SPRUCE.

Pinus alba.

This Spruce is much less plentiful in Vermont than the preceding species, to which, in most respects, it bears a strong resemblance, and is applied to the same uses.

THE BALSAM FIR.

THE HEMLOCK.—THE LARCH.

THE MOUNTAIN ASH.



THE SILVER, OR BALSAM FIR.

Pinus balsamea.

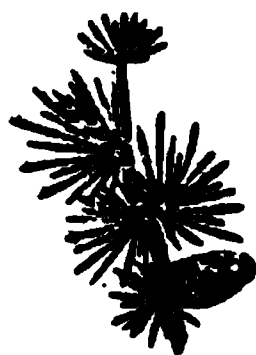
The fir tree flourishes best in a cold, moist, sandy loam, and hence it is most commonly found growing on the north side of our mountains and about the margin of cold springy swamps. It sometimes, though rarely, reaches 50 feet in height, and its diameter seldom exceeds 12 or 15 inches. Where this tree stands alone, and develops itself naturally, its branches, which are numerous and thickly garnished with leaves, diminish in length in proportion to their height, and thus form a round pyramid or cone of remarkable regularity and beauty. The wood is very white, but its texture is coarse and open. It is sometimes used for staves in making casks, and answers well for dry casks, but is not so good for holding liquids. It is also sawn into boards for making boxes, and is used for rafters, joists, &c., in frames. The balsam, for which this tree is somewhat celebrated, is obtained from the blisters or tumors on the bark. It may be collected with considerable facility with a teaspoon. For this purpose an incision is made in the lower part of the blister with the point of the spoon, and the pressure required in the operation causes the balsam to flow into the spoon, from which it is transferred to phials. The balsam is nearly colorless, has the consistency of honey, and is of an acrid penetrating taste. It is commonly known in this state by the name of *fir balsam*, but is said to be sold in many places abroad under the improper name of *Balm of Gilead*. It is of some celebrity as a medicine, particularly in pulmonary complaints and sprains of the chest and stomach, for which it is taken, a few drops at a time, internally. It is also in repute for its healing properties when applied to external wounds and sores.

THE HEMLOCK.

Pinus Canadensis.

The Hemlock is found in all parts of the state, and in most parts in abundance. It flourishes best in a sandy loam at the foot of hills and on lands slightly inclining. In such situations the trees are often from three to four feet in diameter.

The size of the body of this tree is nearly uniform for about two thirds of its length. In very old trees the large limbs are often broken off four or five feet from the trunk by the weight of the snows lodged upon them, giving to the trees a decrepid and unsightly aspect. The wood of this tree, though abundant, is unfortunately coarse grained, and inferior to most of the other evergreens for architectural purposes. It is, however, extensively used for frames and joists of buildings, for the timbers and planks of bridges, for the floors of barns, for lining boards, lath boards, &c. The logs are used for building dams, wharves and breakwaters, and they are bored and much used for aqueducts. The bark of the hemlock is extensively used in Vermont in tanning leather.



AMERICAN LARCH.

Pinus pendula.

This tree is generally known in Vermont by the name of *Tamarack*, but is sometimes called *Larch*, and sometimes *Hackmatack*. It seems to delight in a cold wet soil, and in this state it is most commonly met with in cold swamps. In the southern and eastern part of the state this tree is extremely rare, but in the western and northern parts it is much more common, and in some swamps is found in considerable quantities. A short distance further north, in Canada, it becomes still more abundant. With us this tree seldom exceeds 80 or 100 feet in height, with a diameter of about 2 feet; but to the north it attains a greater magnitude, and in the neighborhood of Hudson's Bay it is said to emulate our white pine, rising to the height of nearly 200 feet. This tree sheds its leaves in autumn, though its appearance in summer might lead one to suppose it to be an evergreen. The wood is strong and durable, and makes valuable timber for frames of buildings. It is also used for posts in fences, and for staves of dry casks. Although it snaps considerably, it is much superior to the evergreens for fuel.

MOUNTAIN ASH, OR MOOSEMISSA.

Sorbus Americana.

This beautiful little tree is very com-

THE CEDARS.

HOOP ASH.

SHADE TREES.

mon upon our hills and mountains, and by transplanting is found to thrive well in all parts of the state. It seldom exceeds 25 feet in height, or 4 or 5 inches in diameter. It is generally known by the name of *Mountain Ash*, but is not unfrequently called *Moosemissa*. No use is made of the wood, but the bark affords an agreeable bitter, and is considerably used as a tonic. But this tree is chiefly valued as an ornamental shade tree, and its beautiful white blossoms, its pinnated globrous leaves, and bunches of red berries, which remain upon the tree during the winter, make it much admired for that purpose.



WHITE CEDAR, or ARBOR VITAE.

Thuja occidentalis.

This tree is found growing only in swamps, and along the rocky banks of streams and ponds, and is universally known in Vermont by the name of *White Cedar*. It was originally very abundant in the northern and western parts of the state, and is still found in many places in considerable quantities. The wood of this tree is nearly white, with a slight tinge of red. It is very light, soft, fine-grained and somewhat odorous. For durability it ranks next, among our forest trees, to the red cedar, and is extensively used for posts and rails for fences.



RED CEDAR.*

Juniperus Virginiana.

Red Cedar formerly existed in some quantities along the banks and islands of lake Champlain, but on account of the eagerness with which it has been sought for posts and other purposes, it has now become exceedingly scarce. Trees were formerly found 30 or 40 feet in height and 10 or 12 inches in diameter, but few now remain which are more than 10 or 12 feet

* Our cut was made from a young villous branch, which differs materially from that of the old tree.

high, and their growth is so very slow that there seems to be little prospect of a supply by reproduction.

The perfect wood of this tree is of a bright reddish tint and hence it is called *Red cedar*. The wood is compact, fine grained and very light, though heavier and stronger than the *White cedar*. It contains an essential oil, which exhales considerable odor, and which serves as a protection both against insects and moisture. The recent chips and splinters of this wood are often placed in drawers with woollen cloths and beneath carpets, and they are found to be a very sure protection against moths. The wood is also much used in making black lead pencils. But the quality which renders the *Red cedar* most valuable is its durability; and for this it excels every other wood found in the state. There are red cedar posts which have been standing in the common fences in Burlington and other places for 50 years, and which are now, excepting the mere surface, as sound as when set. These are eagerly sought out and preferred to new posts of any other kind, for fences, where great durability is desired.

HOOP ASH, OR HACKBERRY.

Celtis occidentalis.

This tree is found very sparingly in Vermont. In favorable situations, at the south and southwest, it grows to the height of 70 or 80 feet, and with the disproportional diameter of not more than 18 or 20 inches. The wood is neither strong nor durable, but where plentiful, as it is easily split, it is much employed for the rails of rural fences.

For some notice of the Northern Cork Elm, *Ulmus racemosa*, and the Poplars, see page 174.

Shade Trees. There are few if any of the forest trees which we have described, which are not more or less employed for shade, or ornament, about our yards and dwellings; but there are some which seem to be much more suitable than others for this purpose. Among these are the sugar maple, the elm, and the *moosemissa*, or *mountain ash*. To the growth of these, the soil and climate of most parts of the state are well suited, and they are all transplanted without difficulty. The larch too makes a beautiful shade tree, and so do several of our evergreens; but their transplanting is attended with much more difficulty. The best time for transplanting trees generally is believed to be

FRUIT TREES.

APPLE.

in the spring, just before the appearance of the leaves.

Besides the native forest trees which have been used for shade and ornament, several exotics have been introduced for the same purposes. A little more than 30 years ago the Lombardy poplar, *populus dilatata*, was brought into the state, and was, for a time, extensively propagated, and much admired. Its growth was extremely rapid, and the appearance of the young tree was very pretty, but it was soon found that these were its only recommendations, which were more than counterbalanced by several positive objections. The wood was found to be soft and brittle, and nearly useless for fuel or any other purposes. As the barren and fertile flowers of this poplar grow on separate trees, and as none but trees bearing barren flowers have been introduced into this country, no seed is brought to perfection, and being propagated wholly by shoots, its growth, though rapid, was soon found to be feeble and sickly. Before the trees attained any considerable magnitude, the top branches would begin to die and fall off, rendering them unsightly, and giving them, while young, the appearance of decrepitude and decay, and littering the grounds and walks with limbs and rubbish. These circumstances, and the disgusting worms bred among their foliage, gradually lessened them in the public estimation, and for many years past no pains have been taken to propagate them. Many of the old trees have been cut down, and those which remain are generally in a decaying, dilapidated condition, and the prospect now is that they will, in a few years, become extinct.

The locust tree, *Robinia pseudo-acacia*, is one of our most beautiful and agreeable shade trees, and is very much prized, particularly in the western part of the state. It thrives best on the light, warm soil, which was originally covered with forests of white pine, but either the soil or the climate of our mountain towns is unfavorable to its growth; and hence it is not often met with in the central parts of the state. Fears are now entertained that all our locust trees will be destroyed by the Borer.

Fruit Trees. For many years after the settlement of this state was commenced, very little attention was paid to the cultivation of fruit trees. Apple orchards, it is true, were early planted in many places, and in some cases a few plumbs, cherries and perhaps pears, but they were generally suffered to produce their natural fruit, and very little effort was made to improve it by pruning and cultivation. But for a

few years past much more attention has been given to this subject, and many choice varieties of these fruits have been introduced and extensively propagated by grafting and budding.

APPLE. *Pyrus malus*.—This is our most important and abundant fruit, and is found to flourish in all parts of the state. In the older parts the orchards became very extensive, the trees large, and immense quantities of apples were produced. These were mostly manufactured into cider, in consequence of which much more cider was made than could well be consumed, in its crude state, even when it was customary for all to drink it as freely, or more so, than water, and the price abroad did not warrant the expense of transportation. Distillation was therefore resorted to, and large quantities of cider brandy were manufactured. The farmers generally having large orchards could each make, without inconvenience, from half a barrel to two or three barrels of this liquor, and when they had it in their houses, as it did not seem to have cost them much, they felt themselves at liberty to use it very freely; and to this single circumstance may be traced the temporal and perhaps everlasting ruin of many of our previously thrifty farmers. This cause of ruin and misery was in the full tide of operation when the first general movement was made in New England on the subject of temperance.

But after the spell was broken, which had so long bound down all our people to the use, or acquiescence in the use, of distilled spirits, and it was perceived that these liquors were not only unnecessary, but hurtful as a common drink, our farmers began to perceive that those large portions of their lands which were covered with apple orchards were not only yielding them no profit, but that which, under their present management, was doing them a real injury. From this time many endeavored to turn their apples to a better account, by feeding them to their cattle, and hogs, and horses, and for these purposes they were found to be valuable, but caution was necessary, that they should not be fed in too large quantities at a time, especially when the fruit was hard and sour. Many, whose orchards were extensive, cut down large portions of them, that the lands might be more profitably employed in the production of something else. At present our people appear more anxious to improve their fruit by grafting or inoculating choice varieties upon the trees they already have, than to enlarge their orchards; and there are few countries which are capable of

THE PEAR AND CRAB APPLE.

NUTS.

BERRIES.

producing a greater variety of fine apples than Vermont.

The *Pear Tree* does not grow so well in the northern and central mountainous parts of the state, but it flourishes in the southeastern and western parts, where many choice varieties are cultivated and bear well. A few *Quinces* and *Peaches* are raised, but very little attention has been paid to their cultivation. That as good peaches may be raised in Vermont as in any other place, we think will hardly be disputed by any who ate of those which grew in our own garden in Burlington during the past and present year. Our remarks respecting the pear tree will apply also to the *Plum*. In the northern parts of the state, the native, or Canada Plum is much cultivated. It bears plentifully, and the fruit is tolerable. Our plum trees generally are very uncertain bearers. After bearing profusely one year they often pass several years without producing any fruit. *Cherries* flourish well, and several varieties are cultivated.

The *Siberian Crab Apple* is cultivated in the northern parts of the state, where it flourishes well, and bears abundantly. With sugar this fruit makes an excellent marmalade.

Nuts. These are the walnut, chestnut, butternut, beech-nut, oak-nut or acorn, and hazle-nut. Of walnuts we have three kinds, but the pignuts are much the most common. The shell bark hickory is found in some parts, but is not very abundant. The chestnut thrives only in the southern part of the state. Butternuts are common in most parts, and some years they are produced in very great abundance. It is esteemed a luxury by many, and in plentiful years large quantities are gathered and dried. See page 215. The beechnut is the most plentiful nut found in the state, and it abounds in all parts. When the country was new the early settlers depended principally upon this nut for fattening their hogs. But it was in many places as necessary that they should be attended by a guard to protect them against the original proprietors, the bears, as it was that the first settlers should be guarded against the attacks of the Indians. See page 212. The hazlenut grows on a shrub four or five feet high; and, though quite common, but little account is made of it. The above are all indigenous, and grow in a wild state without cultivation. Acorns too were formerly plentiful in many parts of the state, and these, like the beechnut, were for swine and bears a favorite article of food.

Berries. Vermont produces a very con-

siderable variety of berries, both wild and cultivated, and many of them are highly serviceable, not only for desserts, but as articles of food. One of the most important of these is the *currant*, of which we have four species. Of these the red, white, and black currant are largely cultivated in gardens, but the two former are most esteemed, and are much eaten, stewed or made into pies when green; and when ripe they are eaten raw, or in pies, or are preserved in sugar, and their juice mixed with clean sugar at the rate of one pound of the latter to a pint of the former, and boiled from 15 to 20 minutes in a tin or brass kettle, makes an exquisite jell, which may be kept in glass vessels for years without difficulty. The black currant has a peculiar musky taste and odor, and, though liked by some, is not so generally esteemed. Black currants are found in a wild state in our forests, and red currants are also found growing wild upon our mountains, the taste of which is much less agreeable than that cultivated in gardens.

Whortleberries, of the various kinds, are produced in great plenty in different parts of the state, particularly on the pine plains in the neighborhood of lake Champlain. In plentiful years, the quantities of these berries offered for sale in our villages along the western part of the state are very considerable. In 1841, which was remarkably productive in these berries, the quantity brought into the village of Burlington between the 25th of June and the 1st of September, could not have fallen much, if any, short of 200 bushels.

We have three kinds of *raspberries*, the red, black and white, all of which grow wild. The two latter are much improved by cultivation, and are considerably cultivated in gardens. The red raspberry is very abundant on most of our hills and mountains. *Gooseberries* are found growing wild in all parts, but the fruit is generally small. Several choice foreign varieties have been introduced into our gardens, where they are easily cultivated and brought to a high degree of perfection. They are a luxury, which, with very little trouble, every family might enjoy.

Blackberries, of two or three kinds, are common, and they are universally regarded as the most wholesome and delicious wild berry found in the state. A variety of this berry is occasionally found the color of which is a delicate yellowish white. It is sometimes cultivated in gardens, and, contradictory as the terms may seem, several have been able to assert, without contradiction, that they could en-

BERRIES.—MEDICINAL PLANTS.

tain their visitants with a dessert of *white black-berries*.

The *barberry* bush grows well in most parts of the state, but so little use is made of the berry that no effort is made to multiply it. Two kinds of *cranberries*, the high and the low, are common in many of the swamps, and preserved in sugar they make an agreeable and wholesome sauce. Of *strawberries* there are several kinds. The wild, or woods strawberry, though a pleasant fruit, is not found in sufficient quantities to be an object of much regard. The common field strawberry is diffused over the whole state, and in its season affords considerable quantities of delicious fruit, though it seldom grows to a large size. Several varieties of foreign strawberries are cultivated in gardens. Some of these grow to a great size, and with proper attention a small plot of ground may be made to yield a very large quantity of choice fruit. The fox and frost grapes grow wild in most parts of the state, and several exotic grapes are successfully cultivated in gardens, and bear well. The large purple grape endures our climate and ripens its fruit without protection, and this is undoubtedly the most profitable for general cultivation. The more choice varieties must either be housed or buried to preserve them through the winter, and many of them require protection and artificial heat, in order to bring their fruit to maturity. In addition to the above, we have the hobbleberry, the mulberry, the checkerberry, the partridge berry, and some others which are eaten, and several kinds, as the sumac, elder, juniper, &c., which are used in medicine or the arts.

Medicinal Plants.—The native vegetables of Vermont already contribute somewhat to the *Materia Medica* of the country, and when the medicinal properties of our plants become better known, it is probable that the list of those which deserve to be employed in the healing art will be greatly increased. We are of the number of those who look with much more confidence to the vegetable than to the mineral kingdom, for antidotes to the various diseases and ills which flesh is heir to. Not that we would go to the lengths of some of our name, and banish all mineral substances from our pharmacopœia, but, being fully persuaded that for removing a great majority of diseases, the remedies derived from the vegetable kingdom are not only more effectual, but far more safe than those derived from the mineral kingdom, we would gladly see the medicinal properties of our plants more thoroughly investigated, their reputed virtues can-

vassed, and their proper places assigned them among the articles of our *materia medica*.

In the preceding account of our forest trees, we have briefly mentioned the medicinal purposes to which the parts of several of them are applied. We had intended in this place to notice a few of the many herbs and roots which are, or have been, of repute for their medicinal virtues, but we have not room. We would, however, remark that the Ginseng, *Panax quinquefolia*, was the first medicinal root which attracted much attention in this state, and is the only one which has been to any considerable extent an article of exportation. This root had long been regarded in China as a *panacea*, and was supposed to be indigenous only in that country and Tartary, till 1720, when it was discovered by the Jesuit *Lafitan*, in the forests of Canada. Such was the demand for the root in China, at that period, that it soon became a considerable article of commerce. Upon the settlement of this state the ginseng was found to grow here in great plenty and perfection, and it soon began to be sought with eagerness for exportation. For many years it was purchased at nearly all the retail stores in the state, and was sent to the seaports to be shipped to China. Those who dug the root sold it in its crude state for about 2 shillings or 34 cents per lb., and it was so plentiful in some places that digging it was a profitable business. The root is a mild, pleasant, and wholesome bitter, but it has never ranked very high as a medicine in this country, and its exportation and the clearing of the country has rendered it scarce.

Flowering Plants. This state is particularly rich, considering its northern situation and mountainous surface, in beautiful flowering plants. Several of these have already been noticed in the observations preliminary to the preceding catalogue. Among our most singular flowering shrubs may be mentioned the Witch Hazel, *Homomelis Virginica*. This shrub puts forth its modest yellow blossoms usually in October, after the leaves have been killed by the frost, but the seed is not matured till the following year.

Poisonous Plants, which are natives of Vermont, are not numerous. Enough, however, exist to render caution necessary in gathering herbs, either for food or medicine. A few poisonous plants have also been introduced, and to some extent naturalized. Of these may be mentioned the poison hemlock, which may be seen growing in many places by the roadsides.

CHAPTER VIII.

GEOLOGY AND MINERALOGY OF VERMONT.

When we commenced our undertaking four years ago, we had little doubt that there would be a Geological Survey of the state, under the patronage of the government, in season to enable us to embrace the results of it in the present work. In consequence of this expectation, we have devoted less attention to the geology of the state than to the other departments of our natural history; and, a survey not having been undertaken, as we anticipated, we must content ourselves for the present with only a few general remarks on these interesting subjects. Enough is already known to make it certain that our state ranks among the first in the Union in mineral resources, and by private and individual enterprise something has already been done towards turning these resources to account, as may be seen by reference to our account of Strafford, Bennington, Plymouth, and some other towns in part third. The few remarks which we shall offer will be presented under the heads of Rocks, Metals, and Minerals.

Rocks.

The ranges of rocks in this state, for the most part, extend through the state in lines parallel to the principal range of the Green Mountains. The greater part of the rocks are of primitive formation. The ranges, commencing on the west side of the state, according to Prof. Eaton, are nearly in the following order:—1. Old Red Sandstone in an interrupted range;—2. Graywacke;—3. Transition, or Metaliferous Limestone, alternating with Transition Argillite;—4. Transition, or Calciferous Sandstone;—5. Transition Argillite;—6. Primitive Argillite;—7. Sparry Limestone;—8. Granular Limestone;—9. Granular Quartz, containing hematitic iron ore and manganese, and lying at the foot of the Green Mountains on the west side;—10. Hornblende Rock;—11. Gneiss, with alternating layers of Granite;—12. Mica Slate, constituting the middle ridge of the Green Mountains, and extending, in many places, a considerable distance down the eastern side. Most of these ranges

of rocks extend through the whole length of the state; On the east side of the Mountains the geological features are not so well defined, nor so well known. Although there are here indications of ranges nearly parallel with those on the west side, they are frequently interrupted and jumbled together; the different rocks often being arranged in alternating layers. The principal ranges of rocks in the central part of the state are nearly as exhibited in the following diagram of a vertical section passing from east to west, through Camel's Hump:

*References.*

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| 1. Lake Champlain. | e. Slates, Graywacke, Argillaceous, &c. |
| 2. Camel's Hump. | f. Mica Slate. |
| 3. Montpelier. | g. Quartz, Talcoso Slate and Chlorite. |
| 4. Connecticut River. | h. Argillaceous Slate. |
| a. Sandstone. | i. Granite. |
| b. Argillaceous slate. | j. Lime. |
| c. Graywacke Sandstone. | k. Argillaceous Slate. |
| d. Limestone. | |

Granite. This rock shows itself very sparingly in the Green Mountain range, and on the west side of the mountains hardly exists at all, except in small rolled masses. On the east side of the mountains it occurs in many places in Windham and Windsor counties. In the northern part of Orange county, the southeastern part of Washington and southwestern part of Caledonia county, it constitutes the principal rock *in situ*. From this great granite region was obtained the material for building the State House. (See Part III, p. 9.). Orleans county abounds in huge granite boulders, which make excellent building stone.

Gneiss. This occurs in many places along the summits of the Green Mountain range and in the counties of Windham and Windsor, where it serves a good purpose for walls, under-pinnings, &c.

Mica Slate. This constitutes almost the entire middle range of the Green Mountains from Massachusetts to Cana-

ROCKS, METALS AND MINERALS.

da, and is met with more or less abundantly in all the counties on the east side of the mountains. It is of little value as a building stone, excepting for wall fences, but is found in many places suitable for covering stone bridges, for flagging stone, &c. In Halifax and some other places it is found of a quality suitable for common grave stones.

Argillaceous Slate. Several considerable ranges of this slate are found in Vermont extending from south to north. It is abundant along Connecticut river, and in Windham county it is extensively quarried at Dummerston and other places for roof and writing slate. A range of this slate extends north from White river through Montpelier, which, at Berlin and some other places, affords slate of a very good quality. A dark colored glazed variety of this slate extends along the eastern margin of lake Champlain, the seams of which are filled with calcareous spar.

Lime. The range of granular limestone, which enters the state at Pownal, and extends almost directly north to Canada, is the most important in the state. This range affords excellent marble, which is extensively wrought in many towns in the counties of Bennington, Rutland and Addison. Very beautiful marble is also found at Swanton. Throughout all the western parts of the state limestone, for the manufacture of lime of the best quality, is abundant. On the east side of the mountains, the best for the manufacture of lime is probably at Plymouth, near the head of Black river. (*See Part III, p. 140.*) Some of this limestone is found to receive a very good polish as it has been wrought to some extent for marble. The other most important localities are at Whitingham and in the southeastern part of Caledonia county. The lime on the east side of the mountains is not only more limited in quantity, but is darker colored, and otherwise inferior to that on the west.

Talcose Slate. This rock forms an interrupted range from Whitingham, on Massachusetts line, to Troy on Canada line. In this range are extensive beds of excellent steatite, or soap stone, which is, in many places, wrought into fire places, stoves, aqueducts, &c. The most important localities are at Grafton, Plymouth, Bridgewater, Bethel, Moretown and Troy. Talcose slate also abounds on the west side of the mountains in the county of Lamoille, and the eastern part of Franklin county.

Serpentine. Nearly in connection with the Talcose range, on the east side of the mountains, this rock shows itself in many

places;—most extensively at Cavendish near Black river, and at Lowell near the source of Missisco river. At the former place, its connection with the limestone and steatite forms that most beautiful variety of marble called *Verd Antique*. (*See Part III, p. 48.*) At the latter place is found beautiful precious serpentine, and several varieties of amianthus and asbestos.

Metals.

Iron ore, in the form of oxydes, is found in greater or less quantities in almost all parts of the state. The most important beds of this ore which have been opened on the west side of the mountains are at Bennington, Tinmouth, Pittsford, Chittenden, Brandon, Monkton and Highgate, and on the east side of the mountains at Troy and Plymouth, for an account of which, see part third, under the respective names, particularly the latter. Sulphuret of iron is also abundant in many places. *See Strafford, in part third.*

Manganese is abundant in connection with the iron ore at Plymouth, Bennington, Chittenden, &c., and has already become a considerable article of exportation.

Lead ore has been found in small quantities at Thetford, Sunderland, Morris-town, and some few other places. There is some prospect that the vein at Morris-town may prove valuable. It is situated upon the top of a large hill, in the seam in talcose slate, the strata of which are nearly vertical, and extend from north to south. The seam at the surface of the rock, which is bare for some distance, is perhaps 18 inches wide, and can be traced north and south several rods. This seam is filled with a substance which seems to be mostly quartz, in which the sulphuret of lead, or galena, is scattered, being in masses from the size of a pin-head to that of a man's fist. The seam, which has been opened to the depth of several feet, is found to increase in width downward, and to become richer in ore, but whether it will repay the expense of working is at present problematical.

Copper ore is found sparingly at several places. At Strafford, where it has been found most plentifully, it has been smelted for the copper. (*See Part III, p. 166.*)

Silver is said to exist in a small proportion in the lead ore, but has been found here in no other connection.

Gold has been found in the lower part of Windham county, but in no other part of the state. In 1826 a lump of native gold was found in Newfane weighing 8 ounces, and in Somerset it has been found in small particles in connection with talcose slate.

LOCATION OF MINERALS.

Minerals.

We shall close this short chapter by indicating some of the principal localities of interesting minerals, many of which will be still further noticed in part third, under the names of the towns in which they are situated.

Actynolite.—Windham, Grafton, Newfane, Brattleboro', Norwich—the latter very beautiful.

Agaric Mineral.—Lyndon, Groton, Manchester.

Aluminous Slate.—Pownal, Rockingham.

Amethyst.—Westminster, Ludlow.

Amianthus.—Weybridge, Mount Holly, Lowell, Barton.

Argillaceous Slate.—Common.

Asbestos.—Mount Holly, Lowell, Troy.

Augite.—Charlotte, Chester.

Bitter Spar.—Grafton, Bridgewater, Lowell.

Blende.—Orwell.

Calcareous Spar.—Vergennes, Shoreham, &c.

Calcareous Tufa.—Clarendon, Middlebury, Hubbardton, Manchester, Orwell.

Carbonate of Lime.—Common.

Chalcedony.—Newfane.

Chlorite.—Grafton, Windham, Bethel, &c.

Chrysoprase.—Newfane.

Copper, (Carbonate Green).—Bellows Falls, (Sulphuret,) Strafford, Waterbury.

Copperas.—Strafford, Shrewsbury.

Cyanite.—Grafton, Bellows Falls, Norwich.

Diallage.—New Haven.

Dolomite.—Jamaica.

Epidote.—Middlebury, Chester, Berkshire, &c.

Feldspar.—Townshend, Thetford, Monkton, &c.

Fetid Limestone.—Shoreham, Bridport, &c.

Flint.—Orwell.

Fluate of Lime.—Putney, Rockingham.

Garnet.—Bethel, Bridgewater, Norwich, &c.

Graphite, Plumbago, or Black Lead.—Hancock, Charlotte.

Hornblende.—Jericho, Ludlow, &c.

Hornstone.—Middlebury, Shoreham, Salisbury, Bennington, Orwell.

Jasper.—Middlebury, in rolled masses.

Kaolin.—Monkton, Brookline.

Lead, (Sulphuret) or Galena.—Sunderland, Thetford, Danby, Morristown.

Lime, Fluate.—Putney, Rockingham, Thetford.

Lime, Fetid Carbonate.—Bennington.

Lithomarge.—Bennington.

Macle.—Near Bellows Falls.

Manganese, Oxyde.—Bennington, Brandon, Monkton, Pittsford, Chittenden, Plymouth.

Marble.—Shaftsbury, Manchester, Dorset, Rutland, Middlebury, Swanton, Plymouth.

Marl.—Peacham, Barnard, Benson, Alburgh.

Mica.—Chester, Craftsbury, Orange, Grafton, &c.

Novaculite, or Oil Stone.—Thetford, Memphremagog Lake.

Polstone.—Grafton, Newfane.

Potter's Clay.—Middlebury.

Prehnite.—Bellows Falls.

Quartz.—Common. *Fetid Q.*, Shrewsbury. *Greasy Q.*, Grafton, Hancock, New Haven, &c. *Quartz Crystal*, Castleton, Vergennes, Waitsfield, St. Johnsbury, &c. *Milky Q.*, Stockbridge, Grafton, Middlebury. *Radiated Q.*, Hartford. *Smoky Q.*, Shrewsbury, Wardsborough. *Tabular Q.*, Windham.

Rubellite.—Bellows Falls.

Scapolite.—Brattleborough.

Schorl.—Grafton, Bridgewater, Brattleborough, Newfane, Dummerston, &c.

Serpentine, Precious.—Lowell, Ludlow, Troy, Cavendish, Windham.

Staurolite.—Rockingham, Vernon.

Sleatite.—Grafton, Bethel, Moretown, Bridgewater, Troy, &c.

Stelactile.—Bennington, Dorset, Plymouth, Montpelier.

Sulphur.—Wilmington, Bridgewater.

Talc.—Grafton, Windham, Newfane, Ludlow, Bridgewater, Hancock, Montpelier, Fletcher, &c.

Titanium.—Whitingham.

Tourmaline.—Peacham.

Tremolite.—Bellows Falls, Wardsboro'.

Tufa Calcareous.—Orwell, Clarendon, Middlebury, &c.

Zinc.—Orwell.

Zoisite.—Rockingham, Wardsborough.

THOMPSON'S VERMONT.

Part Second.

CIVIL HISTORY OF VERMONT.

CHAPTER I.

INDIAN AND COLONIAL WARS.

SECTION I.

Discovery of America—Discovery and Settlement of Canada—Discovery of Lake Champlain.

The discovery of the American continent by Christopher Columbus, in 1492, awakened a spirit of enterprize not only in Spain, but in all the principal nations of Europe. From each of these, expeditions were fitted out, and swarms of adventurers issued forth, either to immortalize their names in the annals of discovery, or to enrich themselves and their country with the treasures of a new world. Spain took the lead in the career of discovery, and was followed by England, France and Holland; but while Spain, invited by the golden treasures of the Incas, was pursuing her conquests and exterminating the defenceless natives in the south, the three latter nations were, for the most part, peaceably and successfully prosecuting their discoveries in more northerly regions.

In 1534, James Cartier, in the service of France, while exploring the continent of America in the northern latitudes, discovered the great gulf and river of Canada, to which he afterwards gave the name of St. Lawrence. The next year he returned with three ships, entered the St. Lawrence, and, having left his ships at anchor between the island of Orleans and the shore, he ascended the river St. Lawrence with his boats, 200 miles further, to

the Indian town of Hochelaga, where he arrived on the 2d day of October, 1535. To this place he gave the name of Montreal, (*Mount-royal*), which it has ever since retained. This was doubtless the first voyage ever made by civilized man into the interior of North America, and the first advance of a civilized people into the neighborhood of the territory of Vermont.

Cartier and his companions were everywhere received by the natives with demonstrations of joy, and were treated by them with the greatest respect and veneration. The savages seemed to consider the Europeans as a higher order of beings, whose friendship and favors they deemed it of the highest importance to secure. And this was true not only of the Canada Indians, but of the natives of every part of the American continent; and the suspicions of the natives were not generally aroused, nor preparations made, either for defence or hostility, till the new comers had manifested their avarice and meanness by the most cruel acts of injustice and violence.

On the 4th of October, Cartier departed from Hochelaga, and on the 11th arrived safely with his party at the island of Orleans. Here he spent the winter, during which he lost many of his men by the scurvy, and in the spring returned to France. In 1540, Cartier again visited Canada and attempted to found a colony; but this colony was soon broken up, and no

QUEBEC SETTLED BY THE FRENCH.

LAKE CHAMPLAIN DISCOVERED.

further attempts were made by the French to establish themselves in this part of the country for more than half a century. In 1603, Samuel Champlain, a French nobleman, sailed up the St. Lawrence, visited the several places, which Cartier had described, and, having obtained all the information, which he could derive from the natives, respecting the interior of the country, he returned to France to communicate his discoveries and to procure assistance in establishing a colony.

It was not, however, till the year 1608, that the French court could be induced to fit out a fleet for the purpose of founding a colony on the river St. Lawrence. This fleet was placed under the command of Champlain, who, in the beginning of July, arrived at a place called by the natives Quebec. The situation of this place being elevated and commanding, and it being mostly surrounded by water, rendering its defence easy, Champlain had in a former voyage designated it as the most eligible spot for beginning a settlement. He therefore, immediately commenced cutting down the timber, clearing the land, building houses, and preparing the soil for cultivation. Here he spent the following winter, in the course of which his little colony suffered extremely from the scurvy and from the severity of the climate.

In the spring of 1609, Champlain left Quebec, accompanied by two other Frenchmen and a party of the natives, for the purpose of exploring the interior of the country, particularly the southern lakes, which the Indians informed him opened a communication with a large and warlike nation called the Iroquois. Champlain proceeded up the St. Lawrence and the river now called the Richelieu, till he arrived at a large lake. To this lake he gave his own name, which it still retains. Proceeding southward, he reached another lake lying to the southwest of lake Champlain, which he named St. Sacrement, but which is now known by the name of Lake George.*

On the shores of lake George, they fell in with a party of the Iroquois, between whom and the Canada Indians, a war had long subsisted. A skirmish immediately ensued, but the Frenchmen being armed with muskets, it was soon decided in favor of Champlain and his party. The Iroquois were put to flight, leaving 50 of their number dead upon the field, whose

*It is said to have been called *Horicon* by the natives. Mr. Spafford, in his *Gazetteer of New York*, page 272, says that the Indians called it *Osserion*, signifying the tail of the lake, in allusion probably to its connexion with lake Champlain.

scalps were taken and carried to Quebec. This was doubtless the first time the Indians, in these regions, ever witnessed the effect of European arms, and it is probable the panic produced in the astonished natives, contributed, not a little, to a favorable and speedy termination of the combat.*

Thus, so early as the year 1609, was lake Champlain, and the western borders of the present territory of Vermont, discovered and partially explored by the French; and although, after this event, more than a century elapsed, before this tract of country became the residence of any civilized inhabitants, it was, during this period, and long after, the theatre of war, and a scene of Indian havoc and cruelty, of the most appalling character. But these wars were wholly carried on by the Canada Indians and the French, whose settlements were rapidly extending up the St. Lawrence, on one part, and by the confederated nations of the Iroquois on the other, previous to the year 1664. This year the Dutch settlement of New Netherlands, was surrendered to the English, and its name changed to New York; and from this period the country, now called Vermont, and lake Champlain became the great thoroughfare of the French and English colonies and their Indian allies in their almost incessant wars with each other.

SECTION II.

Progress of the English and Dutch settlements, from 1607 to 1638.

While the French were founding their colony at Quebec, exploring the regions of Canada, and rapidly extending their settlements along the banks of the St. Lawrence, the other nations of Europe were not inactive. The English, after several unsuccessful attempts, succeeded in 1607, in making a permanent settlement upon the banks of James river in Virginia, and about the same time planted a small colony in the present State of Maine. In 1614, Capt. John Smith explored the sea coast from Penobscot to cape Cod, drew a map of the same and

* Champlain was made governor of the colony of Canada which he established; became a prisoner to the English, when Quebec surrendered to Sir David Kirk in 1629; was restored to the government of Canada after the peace of 1632; and died at Quebec in December, 1635. He was upright and amiable in his deportment—was zealous in propagating the Roman Catholic faith, and was often heard to remark, that "the salvation of one soul was of more value than the conquest of an empire."

NEW YORK SETTLED.

PLYMOUTH SETTLED BY THE ENGLISH.

PEQUOT WAR.

denominated the country New England.

In 1609, Capt. Henry Hudson, at that time in the service of Holland, discovered and gave his own name to Hudson river, now in the state of New York, and in 1614, the Dutch began a settlement on the island of Manhaftan, where the city of New York now stands. To the country they gave the name of New Netherlands and the town they called New Amsterdam, in allusion to the country and city they had left in Europe. About the same time they built fort Orange where Albany now is, and soon after began settlements at Schenectady and other places in the vicinity.

In 1620, a band of English subjects, who, to avoid persecution, had 20 years before, taken refuge in Holland, and who were denominated *puritans* from their scrupulous religious conduct, embarked for America, where they hoped to be allowed the privilege of enjoying, undisturbed, their peculiar notions, and of worshipping their Creator in that unadorned simplicity of manner, which they supposed the scriptures to inculcate, but more perhaps to indulge the spirit of enterprise inherent in the Saxon race, and to find room for the exercise of bodily and mental powers, which could not remain inactive nor brook to be controlled. Their place of destination was the mouth of Hudson river; and, as they contemplated forming their settlement under the protection of the English, they had obtained a patent of lands from the Virginia company in England previous to their embarkation.

After encountering many difficulties and delays they finally got to sea, but their pilot, either through treachery or ignorance, shaped his course so far to the northward, that the first land they discovered was cape Cod, distant more than 300 miles from the nearest civilized settlement, and not within the limits of their patent. The season was so far advanced, it being now the 9th of November, that it was deemed expedient to attempt a settlement in the section of country where they were, and preparations for that purpose were immediately commenced. After spending some time in exploring the coasts and harbors; and after having formed themselves into a body politic under the crown of England and chosen John Carver, their governor, they landed on the 22d day of December, and began a settlement, which they called New Plymouth, (now Plymouth in Massachusetts,) in allusion to the town they had left in England.

This colony at first consisted of 101 persons; but the severity of the climate, the want of accommodations, their un-

sual hardships and a mortal sickness which prevailed, reduced their number to 56 before the opening of the next spring. Their drooping spirits were however revived during the next summer, by the arrival of supplies from England and by a considerable addition to the number of settlers. From this time the affairs of the Plymouth colony assumed a brighter aspect, and the settlements in these parts were rapidly extended.

As early as the year 1623, the English had begun settlements at Portsmouth and Dover in the present state of New Hampshire, and, in 1633, they had penetrated the wilderness to Connecticut river and established themselves at Windsor in Connecticut. In 1635, they had extended their settlements northward up this river as far as Springfield in Massachusetts, and soon after they established themselves at Deerfield. Thus early were the French on the north, the Dutch on the south and the English on the east advancing their settlements into the neighborhood of the present state of Vermont.

A short time previous to the arrival of the Plymouth colony a mortal sickness had prevailed among the natives, by which the country, in the neighborhood of their landing, had been almost divested of inhabitants. But the natives, who remained, welcomed the English with demonstrations of joy, and seemed disposed to admit the new comers into their country upon friendly terms. But the repeated acts of injustice and extortion on the part of the settlers, and the astonishing rapidity with which their settlements were extending over the country, at length aroused the jealousy of the Indians, and in 1630, a general conspiracy was formed by the Narragansets and other tribes, the object of which was the total extermination of the English. The settlers, however, were seasonably informed of the plot, and their vigorous preparations to defeat it effectually deterred the Indians from attempting its execution.

But, soon after this event, the English settlers were involved in a war with the Pequots, a powerful tribe of Indians, who inhabited the northwestern parts of Connecticut. This war was prosecuted with vigor on both sides, but was terminated in 1637 by the complete overthrow of the Pequots. Seven hundred of the Indians were slain, some fled to the Mohawks, by whom they were treacherously murdered, and the Pequots, who remained in the country and the other tribes of Indians were so much terrified at the prowess of the English as to be restrained from open hostilities for nearly forty years.

MONTREAL BURNT.

SALMON RIVER FORT TAKEN.

SCHENECTADY DESTROYED.

SECTION III.

French and English Colonies—Transactions in the vicinity of Vermont from 1638 to 1705.

Although both the French and English colonies had long been in the habit of furnishing the Indians with arms, ammunition, provisions and clothing, when going to war either among themselves, or with an opposite colony; yet previously to the year 1689, no expedition had ever been fitted out in one colony for the express purpose of aiding the Indians in their depredations upon another. This year it was resolved by the French to attempt, by the aid of the Canada Indians, the conquest of the province of New York, which had now been for some time in possession of the English. They looked upon this course as the only effectual method of subduing their most inveterate and troublesome enemy, the Iroquois.*

It was proposed that a large body of Canadians and Indians should march by the way of lake Champlain, and fall upon Albany and the other northern settlements; and that the city of New York should be at the same time attacked by a fleet, ordered for that purpose from France. But while preparations were making and before the arrival of the fleet, the Iroquois made a descent upon Canada, plundered and burnt Montreal and broke up most of the frontier settlements. Frontenac, the French general, was so much disheartened by these calamities, that he relinquished the hope he had entertained of conquering New York, but he considered some attempt against the English settlements indispensable, in order to revive the drooping spirits of the Canadians and Indians.

Two parties were therefore sent out. One of these, under the command of M. Hertel, on the 18th of March, 1690, succeeded in destroying the fort at Salmon falls in New Hampshire, where they slew 30 of the English and took 54 prisoners, whom they carried to Canada. The other party, consisting of 200 French and 50 Indians, commanded by D'Aillebout, set out from Montreal in the beginning of January, and, proceeding by the way of lake Champlain, directed their march towards Schenectady, a settlement on the Mohawk river, 14 miles northwest from Albany. But on account of the length of their march through deep snows in the

midst of winter, they were reduced to such extremities of hunger and fatigue, when they arrived in the vicinity of this place, that they thought seriously of surrendering themselves to the English as prisoners of war. They, however, sent forward their spies, who reported, on their return, that the inhabitants were in no apprehension of danger—that the soldiers were few and undisciplined, and that the place was in no condition for defence.

Encouraged by this intelligence, the party moved forward, and on the 8th of February, 1690, at 11 o'clock in the evening, they entered the village of Schenectady, and, separating into small parties, appeared before every house at the same time. Never was a place more completely surprised. Without the least apprehension of danger the inhabitants had just retired to their beds, and, while their senses were now locked in the soundest sleep, the terrible onset was made. A general shriek aroused the place, and to many it was the shriek of death. The terrified and bewildered inhabitants attempted to rise from their beds, but they rose only to meet the tomahawk, which was lifted for their destruction. The whole village was instantly in flames; and to add to this heart rending scene, the infernal yell of the savage was incessantly commingled with the shrieks and the groans of the dying.

In this massacre no less than 60 persons perished; and 27 were taken prisoners and carried by the French and Indians into captivity. They, who escaped the hands of the enemy, fled nearly naked towards Albany through a deep snow, which had fallen that very night. Of those who succeeded in reaching Albany, no less than 25 lost some one, or more, of their limbs by the severity of the frost. The news of this awful tragedy reached Albany about day break and spread universal consternation among the inhabitants. The enemy were reported to be 1400 strong, and many of the citizens of Albany advised to destroy the city and retreat down the river towards New York. But Col. Schuyler and some others at length succeeded in rallying the inhabitants, and a party of horse soon set off for Schenectady. Not thinking themselves sufficiently strong to venture a battle, the enemy were suffered to remain in the place till noon, when, having destroyed the whole village, they returned to Canada with their prisoners, and with 40 of the best horses loaded with the spoils.

On the first of May following, commissioners from the several English colonies met at the city of New York for the pur-

* The Iroquois, or Six Nations, had their chief residence on the Mohawk river, and to the southward of Lake Ontario in the state of New York, but their predatory excursions and the terror of their arms extended to a great distance around.

pose of concerting measures for the common safety and defence. Here it was agreed that the conquest of Canada would be the only effectual means of securing peace and safety to their frontiers, and it was recommended that vigorous efforts be made for the accomplishment of that object. Two expeditions were therefore planned; one under Sir William Phipps, which was to proceed against Quebec by water, and the other under John Winthrop, which was to be joined by the Iroquois, and, proceeding by the way of lake Champlain, was to attack Montreal. The latter expedition was abandoned on account of the lateness of the season and the refusal of the Iroquois to join it, and the one under Phipps proved unsuccessful.

In the summer of 1691, Col. Schuyler put himself at the head of a party of Mohawks, who were a tribe of the Iroquois, and passing through lake Champlain and the western borders of Vermont, made a successful descent upon the French settlements on the river Richelieu, in which were slain 300 of the enemy; a number exceeding that of his own force. In January, 1695, a party of six or seven hundred French and Indians marched by the way of lake Champlain and attacked the Mohawks in their own country. Intelligence of these transactions no sooner reached Albany, than Schuyler, at the head of 200 volunteers, hastened to their relief. Several engagements ensued, in which Schuyler had the advantage, and the enemy were soon compelled to make a hasty retreat to Canada.

These reciprocal depredations were continued till the treaty between France and England, in 1697, put an end to hostilities and restored peace to the colonies. But this peace was of short continuance. War was again declared in Europe in 1702, and in this the colonies were soon involved. During this war the frontiers of New England were kept in continual alarm by small parties of the enemy and suffered severely. The town of Deerfield in Massachusetts had been settled some years and was at this time in a very flourishing condition: but, being the most northerly settlement on Connecticut river, excepting a few families at Northfield, the French and Indians devoted it to destruction.

In the winter of 1704, a party of about 300 of the enemy under De Rouville set out upon an expedition against this ill-fated place. They proceeded up lake Champlain to the mouth of Winooski, or Onion river, and, following up that stream, they passed over to Connecticut river.

Proceeding down the Connecticut upon the ice, they arrived in the vicinity of Deerfield on the 29th of February. Here they concealed themselves till the latter part of the night, when, perceiving that the watch had left the streets and that all was quiet, they rushed forward to the attack. The snow was so high as to enable them to leap over the fortifications without difficulty, and they immediately separated into several parties so as to make their attack upon every house at the same time. The place was completely surprised, the inhabitants having no suspicions of the approach of the enemy till they entered their houses.

Yet surprised and unprepared as they were, the people of Deerfield made a vigorous defence; but were at length overpowered by the enemy. Forty-seven of the inhabitants were slain, the rest captured and the village plundered and set on fire. About one hour after sunrise the enemy hastily departed; and although pursued and attacked by a party of the English, they succeeded in escaping to Canada, where they arrived with their prisoners and booty after a fatiguing march of 25 days.* For several years after the destruction of Deerfield the frontiers, both of Canada and the New England provinces, were one continued scene of massacre and devastation.

SECTION IV.

French and English Colonies.—Transactions in Vermont and its vicinity from 1705 to 1749.

The merciless depredations upon the frontiers of New England still continuing, it was again determined, in 1709, to attempt the conquest of Canada. The plan of operations was very similar to that devised in 1690. Quebec was to be attacked by water, and an army of provincial troops was at the same time to proceed by the way of lake Champlain and reduce Montreal. But the failure of Great Britain to furnish a fleet for the enterprise against Quebec, and the mortal sickness, which prevailed among the troops collect-

* One of the prisoners, taken in this descent upon Deerfield and carried to Canada, was the Rev. John Williams, who was grandfather of the Rev. Samuel Williams, L. L. D. the earliest and ablest historian of Vermont, and great grandfather of the Hon. Charles K. Williams, the present Chief Judge of the Supreme Court of this State. He was born at Roxbury, Mass. in 1764; graduated at Harvard College in 1683; settled at Deerfield, where he was taken in 1704; was exchanged and returned to Deerfield in 1706; and died in 1728.

EXPEDITION AGAINST CANADA. FORT DUMMER BUILT. CROWN POINT FORT BUILT.

ed at Wood Creek, and designed to act against Montreal, defeated all their plans, and the army raised was consequently disbanded. The failure of these designs against Canada, again left the English frontiers exposed to all the horrors of Indian warfare.

The next year the English colonies fitted out an expedition against the French settlements at Acadia, and encouraged by their success, they now began to meditate another attempt upon Canada. The same plan of operations was adopted, which on two former occasions they had been unable to carry into effect. Quebec was to be invested by water, and Montreal was to be at the same time assailed by an army, which was to enter Canada by the way of lake Champlain. The fleet designed to proceed against Quebec was therefore collected and equipped at Boston, and the army, which was to reduce Montreal, was collected at Albany; and the most sanguine hopes of success prevailed throughout the colonies. But all these hopes were blasted in one fatal night. The fleet sailed from Boston on the 30th of July, 1711, and just as it entered the St. Lawrence it encountered a storm in which eight of the vessels were wrecked and more than a thousand of the men perished.

The army designed to enter Canada by the way of lake Champlain, had advanced but a short distance from Albany, when they received the disheartening intelligence of the disaster which had befallen the fleet. They immediately returned; the expedition was given up and the army disbanded. Thus terminated the third attempt at the conquest of Canada, leaving the frontiers still exposed to the inroads of a merciless foe. A peace was, however, concluded in Europe between Great Britain and France about this time, which put an end to the contest between their colonies in America, and during the next year treaties of peace were made with most of the hostile Indian tribes. But the peace with the Indians was of short continuance. They had long been jealous of the growing power of the English, and were ready to seize upon the most trifling injury as a pretext for the renewal of hostilities.

From the year 1720 to 1725, a very destructive war was carried on between the eastern Indians and the New England provinces. The French and English were at this time at peace; but the French missionaries, and the governor of Canada himself, were actively employed in instigating the Indians to hostilities. In the progress of this war the English made a

successful expedition against the Indian town of Norridgewok, where they slew the Jesuit missionary, Rasles, and 80 Indians, and destroyed the town; and it was during this war, in the year 1724, that the first civilized establishment was made, within the present limits of Vermont, by the erection of fort Dummer.

To the year 1725, a long peace succeeded, not only between France and England, but also between the colonies and the various Indian tribes. But the colonies, during this time, were not inactive. They were busily employed in advancing their out-posts, extending their settlements and preparing for future emergencies. The English had established a trading-house at Oswego in 1722. In 1726, the French, in order more effectually to secure to themselves the trade with the natives, launched two vessels on lake Ontario and repaired their fort at Niagara. In 1731, the French came up lake Champlain and established themselves in the present township of Addison in Vermont, and shortly after erected a fortress upon a point of land on the west side of the lake and nearly opposite, which they called St. Frederick, but which afterwards took the name of Crown Point.

The country along lake Champlain, where these establishments were made, belonged to the Iroquois Indians, but was claimed by New York and was granted in 1696 to one Dellius, a Dutch clergyman at Albany. By the English colonies, the proceedings of the French were observed with much solicitude; yet on account of the internal divisions in the province of New York, no effectual measures were taken to prevent them. Thus were the French permitted to make their advances towards the English settlements and, upon lands claimed by the English, to erect a fortress, which would enable them to prosecute their future expeditions against the frontiers of New York and New England, with facility and safety.

In 1744, Great Britain and France were once more involved in war, which soon extended to their colonies and their Indian allies, when the English began to experience in the depredations of the enemy, their extreme folly in permitting the French to establish themselves at Crown Point. Hoosic fort, at Williamstown in Massachusetts, and near the south-west corner of Vermont, was at this time the most northern post of the English in the western part of New England.* Against this place an army of about 900 French

* The site of this fort is still pointed out between the two villages of Williamstown and North Adams in Berkshire county, Mass.—Hall.

HOOSIC FORT TAKEN.

FORTS BUILT IN VERNON.

DEFENCE OF CHARLESTOWN.

and Indians, under M. de Vaudreuil, proceeded from Crown Point in August, 1746, and on the 20th of that month appeared before the fort. The garrison consisted of only 33 persons, including women and children, and was commanded by Col. Hawks, who, after a vigorous defence of 28 hours, and having expended all his ammunition, surrendered to the enemy. Hawks lost but one man, while more than 40 of the assailants were either slain or mortally wounded; and he supposed that, had he been well supplied with ammunition and provisions, he should have been able to have defended the fort against all the assaults of his numerous army.

The English had, at this time, extended their settlements as far northward along Connecticut river as *Number Four*, now Charlestown, in New Hampshire, and had erected several small forts on the west side of that river, in the vicinity of fort Dummer. Among these were Bridgeman's and Startwell's fort in Vernon, Vermont, formerly a part of the township of Hinsdale, New Hampshire. Bridgeman's fort was attacked the 24th of June, 1746, by a party of 20 Indians, who killed two of the English, wounded one and took several prisoners, but were finally repulsed. They, however, succeeded the next year, in taking and destroying this fort, in killing several of the inhabitants, and in carrying a number of others into captivity.

In 1747, the settlement at Number Four was abandoned by the inhabitants, and the fort at that place was garrisoned by 30 men under the command of Capt. Phineas Stevens. On the 4th of April a party of 400 French and Indians under M. Debeline surrounded this fort, and commenced an attack by firing upon it on all sides. This proving ineffectual, the enemy next endeavored to burn the fort by setting fire to the fences and huts around it, and by discharging flaming arrows upon it. Not succeeding in this, they next prepared a wheel carriage which they loaded with faggots, and by pushing this before them, they endeavored by it to set fire to the fort while it protected them from the fire of the garrison.

All these attempts were, however, defeated by the vigilance and bravery of Stevens and his men, and at length an interview took place between the two commanders. At this interview Debeline boasted of his superior numbers, expressed his determination to storm the fort, and described in glowing colors the horrid massacre which would ensue if the fort was not surrendered without further

resistance. To all this Stevens coolly replied; "*I can assure you that my men are not afraid to die.*" After this interview the attack was renewed with much spirit, and after continuing it for three days without success, the French commander proposed to Stevens that he would abandon the siege and return to Canada on condition that the garrison would sell them provisions for the journey. This Stevens absolutely refused, but proposed to give them five bushels of corn for every captive for whom they would leave a hostage, until they could be brought from Canada. The enemy, not relishing these conditions, after firing a few guns, withdrew, leaving Stevens in peaceable possession of the fort.

In this siege Stevens lost not a man, and had but two men wounded. The loss of the enemy was not ascertained, but must have been very considerable. And so highly was the gallantry of Stevens on this occasion esteemed by Sir Charles Knowles, a British naval officer then at Boston, that he presented him an elegant sword; and from this circumstance the township, when it was incorporated, received the name of Charlestown. During the remainder of the war, which did not entirely cease till 1749, the New England frontiers were continually harassed by small parties of Indians, but no considerable expeditions were undertaken, either by the French or English colonies.

SECTION V.

French and English Colonies—from 1748 to 1756. Braddock defeated—the French defeated at fort William Henry.

By the treaty concluded between Great Britain and France in 1748, at Aix la Chapelle, the controversy respecting claims in America was to be referred to commissioners appointed by the sovereigns of the two nations. These commissioners met at Paris in 1752, and labored for some time to establish the claims of their respective courts; but they found it impossible to come to an agreement on the subject, and soon after the two countries were again involved in war, in which their colonies, as usual, shortly after participated.

In 1754, a convention of delegates from the several English provinces convened at Albany for the purpose of devising some general and efficient plan of operations in the struggle which was about to ensue. Here it was resolved to apply to the British Parliament for an act consti-

PROVINCIAL UNION.

EXPEDITION PLANNED.

BRADDOCK DEFEATED.

tuting a grand legislative council, to be composed of delegates from the several legislative assemblies in the colonies, and subject to the negative of a president general appointed by the crown. But this plan of union had the singular fortune to be rejected both by the colonies and the mother country. By the colonies it was supposed to give to the crown prerogatives which would endanger their liberties, and by the king it was supposed to concede to the colonial assemblies rights and powers, which he was by no means prepared to acknowledge.

It was on the 4th of July, 1754, that the above plan of American union was agreed to by the convention, and it is worthy of remark that this plan was consummated, July 4th, 1776, just 22 years from that day, by the declaration of American Independence. During the deliberations of the convention, and the interchange of views and opinions between the colonies and the mother country, the colonies themselves were making every preparation for the defence of their frontiers. In the beginning of the year 1755, Governor Shirley convened the assembly of Massachusetts, and communicated to them a plan, which he had formed, for the reduction of the French fortress at Crown Point. The assembly readily concurred, and commissioners were sent to the neighboring provinces to request their assistance and co-operation.

Col. Johnson, of the province of New York, was appointed to command this expedition, and all the northern colonies were engaged in making preparations for it, when Gen. Braddock arrived in Virginia with two Irish regiments. A convention of the several governors and commanders in the English colonies, was therefore immediately assembled at Albany, in which it was determined that, during the summer, four different expeditions should be undertaken against the French; namely;—one under the direction of Braddock against fort Du Quesne, —one under Shirley against Niagara, —one under Johnson against Crown Point, and one under Cols. Monckton and Winslow against the French settlements in Nova Scotia.

Braddock set out for fort Du Quesne on the 20th of April, with 2200 men and marched forward confident of victory and fame, but, disregarding the advice of his officers and unaccustomed to American warfare, he fell into an ambuscade of about 400 French and Indians, by whom he was defeated and slain. The regular troops were thrown into the utmost confusion by the unexpected onset and fiend-

like yells of the savages, but the Virginia militia, which Braddock had disdainfully placed in the rear, being trained to Indian fighting, continued unbroken and, by the prudent management of George Washington, then a Colonel of the militia and Aid to Braddock, so effectually covered the retreat as to save a part of the army from destruction.

The army, designed for the reduction of the fort at Niagara, effected nothing, except the strengthening of the fortifications at Oswego. Johnson, having collected five or six hundred provincial troops at Albany for the expedition against Crown Point, sent them forward, under the command of Gen. Lyman, to the carrying place between the Hudson and lake George, where they erected fort Edward. Johnson did not leave Albany till the 10th of August, and the latter part of that month he advanced 15 miles beyond fort Edward and encamped near the south end of lake George.

Shortly after his arrival at this place, he received intelligence from his scouts that the French had taken possession of Ticonderoga, which commanded the communication between lake George and lake Champlain. Johnson was aware of the importance of this post, and hastened his preparations that he might move forward and dislodge the enemy. But before his batteaux and artillery were in readiness, the French had erected fortifications sufficiently strong to defend themselves against surprise, or an easy conquest.

Alarmed by the exaggerated account of the English force assembled at lake George, and designed for the reduction of the fort at Crown Point, Baron Dieskau hastened forward to its defence with a considerable army of French and Indians. But having ascertained that an immediate attack from the English was not to be expected, he resolved to move forward and attack the English in their camp, and if successful, proceed further and perhaps get possession of Albany and Schenectady. He embarked his army, consisting of 1800 men, in batteaux and landed at South bay, which is near the south end of lake Champlain. Here he learned from an English prisoner that fort Edward was almost defenceless, and that Johnson's camp at lake George was protected neither by entrenchments, nor by cannon.

Dieskau, therefore, directed his march towards fort Edward, and when within three or four miles of the place, communicated to his army his design of attacking the fort, and expressed to them entire confidence of success. His army, which consisted mostly of Canadians and In-

DIESKAU ADVANCES TOWARDS FORT EDWARD.

DEFEATED AT LAKE GEORGE.

dians, were not however so sanguine in their expectations. They by no means relished the idea of making an assault upon the fort, where they should be exposed to the destructive fire of cannon; but they expressed a willingness to attack the English in their camp at lake George, where they supposed that muskets would be the only arms employed against them. Under these circumstances Dieskau found it necessary to comply with the inclination of his troops and immediately altered the direction of his march and proceeded towards the English encampment.

Johnson had no intelligence of the approach, or of the designs of the enemy till after their departure from South bay, when he learned that a large body of French and Indians were on their march towards fort Edward. He immediately sent off two separate messengers to apprise the garrison of the intended attack, and to bring him intelligence respecting the force and designs of the enemy. One of these messengers was intercepted and slain; the other returned about midnight, and reported that he saw the enemy about four miles to the northward of fort Edward, and evidently designing an attack upon that place. In the morning it was resolved in a council of war that one thousand English and a number of Indians should be detached and sent under the command of Col. Williams to intercept the enemy in their return to lake Champlain, either as victors or defeated in their designs upon fort Edward.

The English encampment had lake George on one side, and two other sides were covered by swamps and thick woods; and after the departure of the detachment a slight breast-work of logs was thrown up and a few cannon, which had just arrived, were planted in front, which was the only assailable side. Williams had proceeded only four miles when he met the enemy in full march towards Johnson's encampment. An engagement immediately ensued, but Williams was obliged to retreat before the superior force of the enemy. Johnson, hearing the firing and perceiving that it approached, beat to arms and dispatched Col. Cole with 300 men to cover the retreat, while he made the best preparation he could for receiving the enemy. About 10 o'clock some small parties came running back to the camp with intelligence that the detachment was attacked on all sides and was retreating; and soon after they who escaped returned in considerable bodies to the encampment.

At half after eleven o'clock, the enemy

were seen to approach in regular order, aiming directly towards the centre of the encampment. When they arrived within about 150 yards of the breast work, they halted, and the Canadians and Indians filed off upon the right and left flanks. The regular troops then moved forward and commenced the attack upon the centre by platoon firing, which, on account of the distance, produced little effect. A brisk fire was now opened upon the enemy by the artillery stationed at the breast-work, which so terrified the Canadians and Indians, that they immediately betook themselves to the swamps, where from behind logs and trees they kept up an irregular fire upon the encampment.

The engagement now became general, and the French regular troops, for some time, maintained their ground and order; but finding themselves abandoned by the Canadians and Indians, and suffering severely by the incessant fire from the breast-work, they at length directed their attack to the right, where they were received with firmness by the regiments of Ruggles, Williams and Titcomb. After continuing an unsuccessful attack upon this point for about an hour, and sustaining a heavy loss from the fire of the English, Dieskau attempted a retreat, as the only means of saving the remainder of his troops.

Observing his intention, a party of the English leaped over their breast-work, and falling upon the rear of the French, soon dispersed them. Dieskau was found resting upon the stump of a tree, wounded and unable to walk. As a provincial soldier approached him, he was putting his hand in his pocket for his watch to present to him; but the soldier, supposing that he was feeling for a pocket pistol, discharged his musket at him and gave him a mortal wound in his hip.

The enemy on their retreat collected and made a halt at the place where the engagement began in the morning with the detachment under Col. Williams.—Here they were attacked by a party of 200 men under the command of Capt. M'Ginnes, a New Hampshire officer, who had been ordered from fort Edward to the aid of the main army under Johnson. The attack was made with impetuosity and spirit, and the French, after a resistance of nearly two hours, were again dispersed in every direction. In this last engagement the English lost 12 men, and the brave M'Ginnes died a few days after his arrival at Johnson's encampment, of the wounds he had received.

The whole loss of the English in these several engagements was 130 slain, and

FORT WILLIAM HENRY BUILT.

ASSAILED BY THE FRENCH.

60 wounded. Among the slain were Col. Williams, Maj. Ashley, and Captains Ingersoll, Porter, Ferrel, Stoddard and M'Ginnes, and among the wounded was Col. Johnson. Of the Indians belonging to Johnson's army about 40 were slain, among whom was Hendrick, a distinguished Mohawk sachem. The loss of the French was about 700 slain, and among these were several officers of distinction. Johnson was deterred by fear, or some other cause, from pursuing the retreating enemy, or making any attempt upon their works on lake Champlain; and the remainder of the campaign of 1755, was spent in erecting a fort at the south end of lake George, which was afterwards called fort William Henry.

SECTION VI.

French and English Colonies—from 1756 to 1758. Fort William Henry surrendered to the French—Massacre of the garrison.

In 1756 a considerable number of troops, and several distinguished officers arrived from England, and a large provincial army was collected at Albany and at fort William Henry. But while the English officers were deliberating upon the course to be pursued and the troops were lying inactive, the French, under the brave Montcalm, were prosecuting their affairs with energy and success. With scarcely any loss on their part, they succeeded in taking and demolishing the forts at Oswego, where they took 1400 prisoners, 120 pieces of cannon, 14 mortars, and a large quantity of ammunition, military stores and provisions, and also 2 sloops and 200 batteaux. The English suffered the season to pass away without any attempt to retrieve their loss, or annoy the enemy.

The command of the English forces in America having been given to Lord Loudon, he sailed from New York in the spring of 1757, with 6000 men for the purpose of attacking the French fortress at Louisburg. At Halifax his force was increased to 12,000 men, with a fleet of 15 ships of the line and a large number of transports under admiral Holburne. But he here received intelligence, that a French fleet of 17 line of battle ships and three frigates had arrived at Louisburg—that their land force amounted to 6000 regulars, 3000 natives, and 1300 Indians, and that the place was well provided with ammunition, provisions and military stores. This information, dissipating eve-

ry prospect of success, the expedition was consequently abandoned.

During these transactions the French under Montcalm were by no means inactive. As early as the 20th of March, they made an attempt to take fort William Henry by surprise, but their object was defeated by the bravery of the garrison, and several of their number slain. They, however, succeeded in burning three sloops, a large number of batteaux, three store houses, and indeed every thing of value, which was not protected by the guns of the fort.

At the opening of the spring, Col. Parker was sent down the lake, with a detachment of about 400 men, to attack the enemy's advanced guard at Ticonderoga, but he was decoyed into an ambushade of French and Indians, who fell upon him with such impetuosity and success, that only two officers and 70 privates of his number escaped. Encouraged by this success, Montcalm resolved once more to attempt the reduction of fort William Henry. For this purpose he collected, at Crown Point and Ticonderoga, all his forces, amounting to 10,000 men, and consisting of regulars, Canadians and Indians.

General Webb, upon whom the command of the English forces devolved on the departure of Lord Loudon, wishing to examine the works at lake George, and to ascertain the force and condition of the enemy at their posts on lake Champlain, selected Major Putnam with 200 men to escort him to fort William Henry. Soon after their arrival, Putnam set out with 18 men in three boats for the purpose of reconnoitering the enemy at Ticonderoga; but before he reached the northwest bay, he discovered a body of men on an island, and leaving two of his boats to fish he hastened back in the other with the information.

He communicated the intelligence to Webb only, who, with much reluctance, permitted Putnam to return for the purpose of making further discoveries and of bringing off the boats. In accomplishing this business, he was observed and pursued by the enemy, and, although at times nearly surrounded by their canoes, effected his retreat to the fort. These transactions were carefully concealed from the garrison by an injunction of secrecy from Webb, who ordered Putnam to prepare immediately to escort him back to fort Edward. Putnam, wishing to be engaged in surprising the enemy, observed, "he hoped his excellency did not intend to neglect so fair an opportunity of giving battle, should the enemy presume to land." To which the general coldly re-

plied, "what do you think we should do here."

The next day Webb returned to fort Edward, and the day following, Col. Monroe was sent with his regiment to reinforce the garrison at lake George. The day after his arrival the French and Indians under Montcalm appeared upon the lake, effected a landing with but little opposition, and immediately laid siege to the fort. Montcalm, at the same time, sent a letter to Monroe, stating that he felt himself bound in humanity to urge the English commander to surrender before any of the Indians were slain and their savage temper further inflamed by a resistance, which would be unavailing. Monroe replied that as the fortress had been entrusted to him, both his honor and his duty required him to defend it to the last extremity.

The garrison, amounting to about 2500 men, made a gallant defence; while Monroe, aware of his danger, sent frequent expresses to fort Edward for succor. But Webb remained inactive and apparently indifferent during these alarming transactions. On the 8th or 9th day of the siege, Gen. Johnson was permitted to set out for the relief of fort William Henry with the provincial regiments and Putnam's rangers; but he had proceeded only three miles, when he received orders from Webb for his immediate return. Webb then wrote to Monroe that he could afford him no assistance, and advised him to surrender on the best terms he could obtain.

Monroe and his garrison, in hourly expectation of relief from fort Edward, defended themselves with much spirit and resolution, till the 9th of August, when, their works having become much injured and their ammunition nearly expended, all their hopes of holding out were at once blasted by the reception of Webb's letter, which Montcalm had intercepted, and now sent in with further proposals for a surrender of the fort. Articles of capitulation were therefore agreed upon and signed by Montcalm and Monroe, by which it was stipulated, that the garrison should march out with their arms and baggage—should be escorted to fort Edward by a detachment of French troops, and should not serve against the French for the term of 18 months—that the works and all the warlike stores should be delivered to the French—and that the sick and wounded of the garrison should remain under the protection of Montcalm and should be permitted to return as soon as they were recovered.

After the capitulation no further troubles

were apprehended. But the garrison had no sooner marched out of the fort, than a scene of perfidy and barbarity began to be witnessed, which it is impossible for language to describe. Wholly regardless of the articles of capitulation, the Indians attached to the French army, fell upon the defenceless soldiers, plundering and murdering all who came in their way. The French were idle spectators of this bloody scene; nor could all the entreaties of Col. Monroe persuade them to furnish the escort, as stipulated in the articles of capitulation. On this fatal day about 1500 of the English were either murdered by the savages or carried by them into captivity, never to return.

The day following these horrid transactions, Major Putnam was despatched from fort Edward with his rangers, to watch the motions of the enemy. He reached lake George just after the rear of the enemy had left the shore, and awful indeed was the scene which presented itself. "The fort was entirely demolished, the barracks, out houses and buildings were a heap of ruins—the cannon, stores, boats and vessels were all carried away. The fires were still burning—the smoke and stench offensive and suffocating. Innumerable fragments of human skulls and bones, and carcasses half consumed, were still frying and broiling in the decaying fires. Dead bodies, mangled with scalping knives and tomahawks, in all the wantonness of Indian fierceness and barbarity, were every where to be seen. More than 100 women, butchered and shockingly mangled, lay upon the ground, still weltering in their gore. Devastation, barbarity and horror, every where appeared; and the spectacle presented was too diabolical and awful either to be endured or described."*

The French satisfied with their success, retired to their works at Ticonderoga and Crown Point, and nothing further was effected in this quarter worthy of notice, either by the French or English, during the remainder of the year; and thus terminated the campaign of 1757, in which the English suffered exceedingly in lives and property and gained nothing. This want of success was doubtless owing, in some measure, to the inefficiency and ignorance of the British ministry in relation to American affairs, but it is principally to be attributed to the want of ability and energy in the generals, to whom the prosecution of the war was entrusted.

* It is stated by Dr. Belknap that the Indians served in this expedition, on the promise of plunder, and were enraged at the terms of capitulation.

SECTION VII.

French and English Colonies—Events of 1758. Capture of Louisburg—Abercrombie defeated—Fort Frontenac and Du Quesne taken.

The repeated failure of the British arms in America, having created much dissatisfaction both at home and in the colonies, a change of ministry was found to be indispensable, in order to secure the public confidence and revive the drooping spirits of the nation; and this was effectually done by the appointment of William Pitt one of the secretaries of state. From this time the British affairs in America assumed a more favorable aspect. Instead of defeat and disgrace, victory and triumph now usually attended the English arms. Measures were concerted with wisdom and prudence and executed with promptness and vigor.

In planning the campaign of 1758, it was determined that the French settlements should be attacked upon several different points at the same time. Twelve thousand troops were to attempt the reduction of Louisburg in the island of Cape Breton, 16000 were to proceed against Ticonderoga and Crown Point, and 8000 against Du Quesne; and the several American colonies were called upon to furnish troops, and to make all the exertions in their power to aid and facilitate these expeditions.

General Amherst took command of the expedition against Louisburg, assisted by Gens. Wolfe, Whitmore and Lawrence, and by Admiral Boscawen, who commanded the fleet. The fleet, consisting of 157 sail, and having the troops on board, sailed from Halifax in Nova Scotia, on the 28th of May, and on the 2d day of June, anchored about seven miles west of Louisburg. On the 8th a landing was effected under the gallant Wolfe, and in a few days the place was completely invested. The garrison consisted of upwards of 3000 men, mostly regulars, and the harbor was defended by six ships of the line and five frigates, all under the command of chevalier Drucour. Amherst proceeded with caution, but with such vigor that the French ships were soon destroyed, and the garrison surrendered themselves prisoners of war on the 26th of July.

The expedition against the French posts on lake Champlain, devolved upon Gen. Abercrombie. Having assembled about 7000 regular and 9000 provincial troops, with a fine train of artillery and the necessary military stores, he on the 5th of July embarked his army at fort William Henry, on board 900 batteaux and 135 whale boats,

and the next morning landed, without opposition, near the north end of lake George. Forming his men into three columns, he moved forward towards the enemy, whose advanced party, consisting of one battalion, lay encamped behind a breast-work of logs. On the approach of the English, they set fire to their breast-work and tents and retreated with precipitation. The English continued to advance, but were soon embarrassed and thrown into some disorder by the thickness of the wood.

Lord Howe was in the front of the centre column with Major Putnam, when a skirmish commenced on the left with the party of the enemy which had retreated from the breast-work. One hundred men immediately filed off under Putnam and Howe, and they soon fell in with the enemy, whose first fire proved fatal to his lordship. Howe had made himself the idol of the army by his affability and virtues, and his fall animated Putnam and his party to avenge his death. They cut their way through the enemy, and being joined by another party of the English, slew about 300 of the French, and took 148 prisoners. But the English columns, being broken and embarrassed by the thickness of the wood, Abercrombie deemed it advisable to march back to the place where they had landed in the morning, rather than pass the night where they were. The next day Col. Bradstreet, with a detachment of the army, took possession of the saw mills without opposition, and the general once more advanced upon the enemy.

The fort at Ticonderoga was very favorably situated for defence. It was surrounded on three sides by water, and about half the other side was protected by a deep swamp, while the line of defence was completed by the erection of a breast-work nine feet high on the only assailable ground. The ground before the breast-work was covered with felled trees and with bushes, arranged with a view to impede the approach of the English. The French garrison consisted of 6000 men and a reinforcement of 3000 troops under M. de Levy, was expected soon to join them.

Abercrombie, wishing to get possession of the fort before the garrison should be augmented by the expected reinforcement, sent forward his engineer to reconnoiter the works, who reported that the breast-work was unfinished and that he believed the place might be immediately assaulted by musketry with a fair prospect of success. The general confiding in this intelligence, marched for-

ABERCROMBIE DEFEATED.

ward to the attack in regular order and with undaunted firmness. The French opened upon them a well directed fire from their artillery, notwithstanding which, the English moved forward undismayed till they became entangled and stopped by the timber which had been felled to impede their approach. For four hours they strove to cut, with their swords, their way to the breast-work through the limbs and bushes, but without success. All this time they were exposed to the deadly fire of the enemy, who were completely sheltered by their breast-work. Their numbers continually diminishing and no prospect of success appearing, Abercrombie thought it expedient to retreat, and accordingly led back his army to their former encampment without being pursued or molested by the enemy.

The English lost in this encounter 1800 men, killed and wounded, and 2500 stand of arms. Every part of the army engaged behaved with coolness and intrepidity, but the loss fell heaviest on a highland regiment, commanded by Lord Murray. Of this regiment, one half of the privates and 25 officers were either slain on the spot or severely wounded. So severe a loss determined the commander-in-chief to withdraw from this scene of carnage, and he hastened back with his shattered army to the encampment at lake George, from whence he sent off all the wounded, who could be safely removed, to fort Edward and Albany.

How far the conduct of General Abercrombie is reprehensible in this unfortunate affair, it is difficult now to determine. The censure of mankind almost always follows misfortune; and so it was in the present case. The attempt to take the fort by storm was considered a rash and imprudent measure—and the retreat was condemned as pusillanimous and unnecessary. And, indeed, with troops, who had manifested such courage and intrepidity in the assault, it is very difficult to conceive what could have prevented the commencement of a regular siege.

Notwithstanding his defeat and mortification, Abercrombie did not suffer his army to remain inactive. He dispatched General Stanwix to erect a fort at the carrying place between the Mohawk and Onondaga rivers; and Col. Bradstreet, with 3000 men, mostly provincials, was ordered to proceed against fort Frontenac, situated at the outlet of lake Ontario. Bradstreet landed his men within one mile of the fort, before the enemy had any intelligence of his approach, and the garrison, consisting of only 110 Frenchmen, with a few Indians, could do no other than

FORT DU QUESNE TAKEN.

surrender at discretion. In the fort were found 60 cannon, 16 mortars, and small arms, military stores, merchandise and provisions in large quantities. He also captured all the enemy's shipping on the lake, consisting of nine armed vessels; and having destroyed them and the fort he returned to Oswego.

While these things were transacting, General Forbes was making his advances towards fort Du Quesne, of which he got possession on the 25th of November, the French having abandoned it and retreated down the Ohio river. Having repaired the works, he changed the name of the fort to Pittsburgh, in honor of William Pitt, the secretary of state who was then at the head of American affairs. Such were the events of the year 1758. The British arms had every where been successful, excepting in the attack upon Ticonderoga, and the hopes and confidence of the public were every where revived. General Amherst, having left a strong garrison at Louisburg, returned to Boston. Thence he proceeded, about the middle of September, to Albany with six regiments, and the remainder of the fall and winter were there spent in concerting measures and making preparations for the campaign of the following year.

SECTION VIII.

French and English Colonies—Transactions of 1759 and 1760. Quebec taken—Ticonderoga, Crown Point and Niagara taken—Expedition against the St. Francis Indians—Montreal and Canada surrender.

The advantages obtained over the French in the preceding campaign gave the British Minister reason to hope this year to complete the conquest of Canada. Three expeditions were therefore projected—one against Quebec, under the command of Gen. Wolfe, one against the forts on lake Champlain, under Gen. Amherst, who was commander-in-chief of the British forces in America, and one against the French fort at Niagara, to be conducted by Gen. Prideaux and Sir William Johnson. It was believed that while these generals were making their attacks on different points, they would assist each other, by dividing the forces and embarrassing the councils of the enemy.

The conquest of Quebec was looked upon as the most important and the most difficult object of the campaign. The city was strongly fortified by nature and art, formidable on account of the number and

QUEBEC TAKEN.

ADVANCE OF GEN. AMHERST.

ROGERS' EXPEDITION.

bravery of its inhabitants, and in a situation in which it could not be much injured by a fleet, or be approached but with extreme difficulty and hazard by land. As soon as the season would permit, Wolfe embarked his troops at Louisburg, sailed up the St. Lawrence and in the latter part of June landed his whole army on the island of Orleans a little below Quebec, without difficulty or opposition.

Quebec was commanded by Montcalm, an able and experienced general; and was defended by works which were deemed impregnable, and by an army much more numerous than that of the English. Wolfe continued his offensive operations without a prospect of success till the beginning of September, when it was resolved, if possible, to effect a landing above the city, and bring the enemy to a general engagement. The fleet, with the army on board, moved up the river under Admiral Saunders, and effected a landing on the 12th of September, a little after midnight. Wolfe put himself at the head of the first party, ascended the heights, and drew up his men in order as fast as they arrived.

Montcalm no sooner learned that the British had gained the heights of Abraham, than he abandoned his strong camp at Montmorenci, resolved to hazard an engagement. Both armies were soon drawn up in order of battle with their respective generals at their head. About 9 o'clock the French army advanced, opening at the same time an irregular and ill directed fire. The fire of the English was reserved till the enemy had approached within 40 yards of their line, when it was opened with effect and kept up with much spirit. Both generals were determined to conquer or die, and for a while the conflict was dreadful. But the English advanced with such firmness and intrepidity, that the French were unable to stand, and were soon defeated and dispersed or made prisoners.

Wolfe and Montcalm both fell at the head of their respective armies. The loss of the French in this battle was 500 slain, and about 1000 prisoners. The English had 50 killed, including 9 officers, and 500 wounded. The French disheartened by their losses, were thrown into great confusion; and on the 18th of September, the remainder of the French troops and the city of Quebec were surrendered into the hands of the English.

While these things were transacting at Quebec, General Amherst was cautiously advancing along lake Champlain. He arrived in the vicinity of Ticonderoga in the latter part of July, without opposition,

and immediately began to make preparations for reducing the fortress by a regular siege. The enemy at first manifested a disposition to make a resolute stand, but soon despaired of holding out against the cautious advances of Amherst, and, on the 27th of July, having dismantled the fortress, they abandoned it, and repaired to Crown Point.

The next day Amherst took possession of the fort, and began immediately to repair and enlarge it, and to make preparations for proceeding against Crown Point. He had scouting parties continually employed to watch the motions of the enemy, one of which returned to the English camp on the first of August with intelligence that the French had abandoned Crown Point also, and had gone down the lake without destroying their works. A body of rangers was immediately dispatched to take possession of the place, and on the 4th the whole army moved forward to Crown Point, where they commenced the erection of a new and strong fortress.

The French troops retired to the isle Aux Noix, which is situated at the north end of the lake, and effectually commands the passage into Canada in this quarter. Here they collected their forces, to the amount of 3500, well provided with artillery, and resolved to make a stand against the English. The French having four vessels on the lake, mounted with cannon, Amherst thought it not advisable to proceed further, till he had provided a superior naval force. In the mean time he was determined that the Indians should feel his resentment for their repeated depredations upon the English colonies. Maj. Rogers, a brave and experienced officer from New Hampshire, was therefore selected to conduct an expedition against the St. Francis Indians, whose village was situated on the south side of the St. Lawrence, not far from Three Rivers. These Indians were noted for their massacres and cruelties to the English.

Rogers embarked at Crown Point on the 12th of September, with 200 men, and proceeded down the lake in batteaux. On the fifth day after he set out, while encamped on the eastern shore of the lake, a keg of gunpowder accidentally exploded, by which a captain and several men were wounded, who were sent back to Crown Point, with a party to attend them. This event reduced Rogers' force to 142 men. With these he moved forward to Missisco bay, where he concealed his boats among some bushes which hung over one of the streams, and left in them provisions sufficient to carry them back to Crown Point.

INDIAN TOWN OF ST. FRANCIS DESTROYED.

Having left two of his rangers to watch the boats, Rogers advanced into the wilderness; but, the second evening after he left the bay, he was overtaken by his trusty rangers, and informed that a party of 400 French and Indians had discovered the boats and sent them away with 50 men, and that the remainder were in pursuit of the English. Rogers kept this intelligence to himself, but despatched a lieutenant and eight men, with the two rangers, to Crown Point, to inform Gen. Amherst of what had taken place, and request him to send provisions to Coos on Connecticut river, by which route he intended to return.

Rogers now determined to outmarch the enemy, and pushed onward towards St. Francis with the utmost expedition. He came in sight of the village on the evening of the 4th of October, and, leaving his men to refresh themselves, he dressed himself in the Indian garb, and went forward to reconnoitre the town. He found the Indians engaged in a grand dance, without apprehensions of danger, and, returning about one o'clock, he led forward his men within 500 yards of the town. At four o'clock, the dance was ended, and the Indians retired to rest.

Having posted his men in the most favorable situation, at day break Rogers commenced the assault. The place was completely surprised. The Indian method of slaughter was adopted. Wherever the savages were found, without regard to age or sex, they were slain without distinction and without mercy. As the light appeared the ferocity of the provincials was increased by discovering the scalps of several hundred of their countrymen, suspended on poles and waving in the air. They were determined to revenge the blood of their friends and relations, and spared no pains completely to destroy the village and its inhabitants. Of the 300 souls, which the village contained, 200 were slain on the spot, and 20 taken prisoners. The English lost only one killed and six slightly wounded.

Having reduced the village to ashes, and refreshed his men, Rogers set out on his return, at 8 o'clock in the morning, with the addition of five English captives, whom he had retaken, and such articles of plunder as he could easily carry away. To avoid his pursuers he proceeded up the river St. Francis, and directed his course toward Coos on the Connecticut. On his march he was several times attacked in the rear, and lost seven men; but forming an ambuscade on his own track, he at length fell upon the enemy with such success as to put an end to further annoyance or pursuit.

FORT NIAGARA TAKEN BY THE ENGLISH.

In the mean time, by order of General Amherst, Samuel Stevens and three others proceeded from Charlestown up Connecticut river, with two canoes, loaded with provisions. They landed on Round island, at the mouth of Passumpsic river, where they encamped for the night; but in the morning, hearing the report of guns, and supposing Indians to be in the vicinity, they were so terrified that they reloaded their provisions and hastened back to Charlestown. Rogers was at this time encamped a few miles up the Passumpsic. About noon he reached the mouth of that river, and, observing fire on the island, he made a raft and passed over to it; but to his surprise and disappointment, no provisions had been left. His men, already reduced to a state of starvation, were so disheartened by this discovery that a considerable number of them died before the next day. Rogers now gave up the command of his men, and told them to take care of themselves. Some were lost in the woods, but Rogers and most of his party, after almost incredible hardships, succeeded in reaching Charlestown. Here, having collected and refreshed the survivors of his heroic band, Rogers proceeded with them to Crown Point, where he arrived on the first day of December, and joined the army under Gen. Amherst; and upon examination he found that his loss, after leaving the ruins of St. Francis, was 3 commissioned officers and 46 non commissioned officers and privates.

While Rogers was humbling the Indians, Amherst was preparing a naval force to attack the enemy at the Isle Aux Noix. This being in readiness, he proceeded down the lake in the beginning of October; but, the season being far advanced, and the weather becoming tempestuous, the expedition was abandoned, and he returned to Crown Point, after having taken, or destroyed, most of the enemy's shipping. Here Amherst spent the remainder of the autumn in enlarging the works and putting every thing in readiness for another campaign.

Gen. Prideaux had proceeded to Niagara in the beginning of summer, and invested the fort about the middle of July; but, being unfortunately killed on the 20th of that month, the command devolved upon Sir William Johnson. Johnson prosecuted the siege with the greatest vigor, and, on the morning of the 24th of July, intercepted and defeated, after a severe conflict, a body of 1200 French and some Indians, who were marching to the relief of the garrison. This battle was fought in sight of the fort, and, in the evening of the same day, the garrison surrendered themselves prisoners of war.

MONTREAL SURRENDERED.

Montreal was now the only place of much strength, or consequence, in possession of the French; and towards this point, at the opening of the campaign of 1760, the English concentrated all their efforts. It was resolved that, while Gen. Murray, with the English forces at Quebec, proceeded up the St. Lawrence, Col. Haviland should lead on the forces from lake Champlain, and General Amherst should approach Montreal with a considerable force by the way of lake Ontario. These armies moved forward with but little opposition, and, what is remarkable, without any knowledge of each other's progress, they all arrived at Montreal on

CANADA CEDED TO GREAT BRITAIN.

the 6th and 7th of September, within two days of each other.

Amherst began immediately to prepare for laying siege to the city, and was getting on his artillery for that purpose, when he received a flag of truce from Vaudreuil, the French commander, who sent two officers, demanding proposals for a capitulation. Amherst stated his terms, to which the French finally submitted, and, on the 8th of September, 1760, the whole province of Canada was surrendered to the British; and by the treaty of peace signed at Paris, February 10, 1763, this province was formally ceded to the King of Great Britain.

CHAPTER II.

SETTLEMENT AND CONTROVERSY WITH NEW YORK.

SECTION I.

Vermont previous to the year 1760.

During the Colonial and Indian wars, the territory of Vermont, as already remarked, was the great thoroughfare, through which most of their expeditions proceeded, and on which many of their battles were fought. Being situated nearly at an equal distance from the French on the one hand and the English on the other, it was constantly exposed to the depredations of both, and became the favorite lurking place of their Indian allies. On this account the settlement of the country had long been regarded as dangerous and impracticable: nor was it until after the complete conquest of Canada by the English in 1760, that any considerable settlements were made. Several places, it is true, had been previously occupied both by the French and English; but they are rather to be regarded as military posts than actual settlements.

The first civilized establishment within the present limits of Vermont, was made in 1724, by the erection of fort Dummer, in the southeastern corner of the township of Brattleborough. The whole of this tract of country had previously, from time immemorial, been in possession of the native Indians. But it does not appear that, subsequently to the discovery of this territory by Champlain, the natives had resided here in very large numbers.

The western parts of Vermont, including the southern portion of lake Champlain, appear to have been claimed by the Iroquois and the northern and north-eastern parts by the Coossucks and St. Francis Indians, but the territory seems rather to have been regarded as a hunting ground than a permanent residence.

Although this tract of country was in some parts mountainous and unproductive, the forests were, in general, well stored with game, and the lakes, rivers and smaller streams abounded in excellent fish, which might have afforded subsistence to a very considerable population in the savage state. We must therefore look to some other cause for the scantiness of the population of these regions, than the incapacity of the country to support it; and this is undoubtedly to be found in its local situation with respect to the various Indian nations. Lying on the frontier of several powerful tribes who were incessantly at war with each other, it became the bloody theatre of their battles and was constantly exposed to hostile invasions from every quarter. Hence we perceive that the same cause prevented its becoming a permanent residence of the Indians in earlier times, which operated during the colonial wars to prevent its being settled by the French and English.

As early as the year 1752, it was proposed by the English to lay out two townships and commence a settlement at Coos

FIRST SETTLEMENTS.

on Connecticut river, where Haverhill in New Hampshire and Newbury in this State now lie. In pursuance of this plan, in the spring of the year 1752, the governor of New Hampshire ordered out a party to explore the country, survey the townships and erect stockades and lodgment for 200 men in each. The object was, partly to get possession of the rich meadows at Coos, and partly to form a barrier against the incursions of the St. Francis Indians in case of war; but the timely remonstrance of that tribe caused the immediate relinquishment of the undertaking; so much was their resentment dreaded at that early period.

Soon after the erection of fort Dummer, several block-houses were built for the protection of the settlers in that part of Hinsdale, N. H. which was situated on the west side of the Connecticut, and which is now called Vernon; and before the year 1754, settlements had been commenced in Vermont as far up the Connecticut as Westminster and Rockingham. But their advancement was now stopped by the breaking out of what was called the French War, which continued, as related in the preceding chapter, till the final conquest of Canada in 1760. During this war these feeble settlements were continually harrassed and annoyed by the French and Indians. The inhabitants could not cultivate their fields without being every moment exposed to the deadly fire of a lurking foe. Their block-houses were frequently surprised and taken, and the inhabitants either massacred, or carried into captivity.

No permanent settlement was effected in Vermont on the west side of the Green Mountains, till after the conquest of Canada by the English. When the French proceeded up lake Champlain and erected their fortress at Crown Point, in 1731, they began a settlement on the east side of the lake in the present township of Addison. This settlement was, however, broken up and all the settlers retired, with the French garrison, into Canada, before Gen. Amherst in 1759.

Such was the original condition of Vermont, and such were the establishments made within its limits previous to the year 1760. No permanent settlements had been made, at the close of this period, except upon the banks of Connecticut river, in the present county of Windham, and here the settlers were few and scattered, probably not amounting in the whole to more than two or three hundred. But in their expeditions against the French, the English colonists had made themselves acquainted with the fertility

FIRST TOWNSHIPS GRANTED.

and value of the lands lying between Connecticut river and lake Champlain, and the conquest of Canada having now removed the difficulty and danger of settling them, swarms of adventurers began to immigrate hither, and from the year 1760, the population of Vermont began to increase with considerable rapidity.

SECTION II.

Controversy between New Hampshire and New York, respecting the territory of Vermont—from 1749 to 1764.

When the English commenced their establishment at fort Dummer, that fort was supposed to lie within the limits of Massachusetts, and the settlements in that vicinity were first made under grants from that provincial government. But after a long and tedious controversy between Massachusetts and New Hampshire respecting their division line, King George II. finally decreed, on the 5th of March, 1740, that the northern boundary of the province of Massachusetts be a similar curve line, pursuing the course of the Merrimac river, at three miles distant on the north side thereof, beginning at the Atlantic ocean, and ending at a point due north of Patucket falls; and a straight line drawn from thence due west until it meets his Majesty's other governments.

This line was surveyed by Richard Hazen, in 1741, when fort Dummer was found to lie beyond the limits of Massachusetts to the north; and, as the king of Great Britain repeatedly recommended to the assembly of New Hampshire to make provision for its support, it was generally supposed to have fallen within the jurisdiction of that province, and, being situated on the west side of the Connecticut, it was supposed that New Hampshire extended as far westward as Massachusetts; that is, to a line twenty miles east of Hudson river.

In the year 1741, Benning Wentworth was commissioned governor of the province of New Hampshire. On the 3d of January, 1749, he made a grant of a township of land six miles square, situated, as he conceived, on the western border of New Hampshire, being twenty miles east of the Hudson, and six miles north of Massachusetts line. This township, in allusion to his own name, he called Bennington. About the same time, a correspondence was opened between him and the governor of the province of New York, in which were urged their respective titles to the lands on the west

TOWNSHIPS GRANTED.

CONFLICTING CLAIMS.

side of Connecticut river; yet without regard to these interfering claims, Wentworth proceeded to make further grants.

These grants had amounted to 15 townships in 1754, but, this year, hostilities were commenced between the French and English colonies, which put a stop to further applications and grants till the close of the war, in 1760. During this war, the New England troops opened a road from Charlestown, in New Hampshire, to Crown Point, and by frequently passing through these lands, became well acquainted with their fertility and value; and the conquest of Canada having finally removed the danger of settling in this part of the country, these lands were now eagerly sought by adventurers and speculators.

The governor of New Hampshire, by advice of his council, now ordered a survey to be made of Connecticut river for sixty miles, and three tiers of townships to be laid out on each side. As the applications for lands still increased, further surveys were ordered to be made, and so numerous were the applications, that during the year 1761, no less than sixty townships of six miles square were granted on the west side of Connecticut river. The whole number of grants, in one or two years more, had amounted to one hundred and thirty-eight. Their extent was from Connecticut river on the east to what was esteemed twenty miles east of Hudson river, so far as that river extended to the northward, and after that as far westward as lake Champlain.

By the fees and other emoluments, which Wentworth received in return for these grants, and by reserving five hundred acres in each township for himself, he was evidently accumulating a large fortune. The government of New York, wishing to have the profits of these lands, became alarmed at the proceedings of the governor of New Hampshire, and determined to check them. For this purpose, Mr. Colden, lieutenant governor of New York, on the 28th of December, 1763, issued a proclamation, in which he recited the grants made by Charles II. to the Duke of York, in 1664, and in 1674, which embraced among other parts "all the lands from the west side of Connecticut river to the east side of Delaware bay." Founding his claim upon this grant, he ordered the sheriff of the county of Albany to make returns of the names of all persons who had taken possession of lands on the west side of the Connecticut, under titles derived from the government of New Hampshire.

To prevent the effects which this proc-

lamation was calculated to produce, and to inspire confidence in the validity of the New Hampshire grants, the governor of New Hampshire, on his part, put forth a counter proclamation, on the 13th of March, 1764, in which he declared that the grant to the Duke of York was obsolete;—that New Hampshire extended as far west as Massachusetts and Connecticut, and that the grants made by New Hampshire would be confirmed by the crown, if the jurisdiction should be altered. He exhorted the settlers to be industrious and diligent in cultivating their lands, and not to be intimidated by the threatenings of New York. He required all the civil officers to exercise jurisdiction as far west as grants had been made, and to punish all disturbers of the peace.* This proclamation served to quiet the minds of the settlers. Having purchased their lands under a charter from a royal governor, and after such assurances from him, they had no idea that a controversy between the two provinces, respecting the extent of their jurisdiction, would ever affect the validity of their titles.

New York had hitherto founded her claim to the lands in question upon the grant to the Duke of York, but choosing no longer to rely on so precarious a tenure, application was now made to the crown for a confirmation of the claim. This application was supported by a petition, *purporting* to be signed by a great number of the settlers on the New Hampshire grants, representing that it would be for their advantage to be annexed to the colony of New York, and praying that the western bank of Connecticut river might be established as the eastern boundary of that province. In consequence of this petition and application of the government of New York, his Majesty, on the 20th of July, 1764, ordered that "the western bank of Connecticut river, from where it enters the province of Massachusetts bay, as far north as the 45th degree of north latitude, be the boundary line between the said provinces of New Hampshire and New York."† This determination does not appear to be founded on any previous grant, but was a decision which the wishes and convenience of the people were supposed to demand.

Surprised as were the settlers on the New Hampshire grants at this order, it produced in them no serious alarm. They regarded it as merely extending the jurisdiction of New York, in future, over their territory. To this jurisdiction they were

* Slade's Vermont State Papers, p. 17.

† Slade's Vermont State Papers, p. 19.

willing to submit; but they had no apprehension that it could, in any way, affect their title to the lands upon which they had settled. Having purchased and paid for them, and obtained deeds of the same under grants from the crown, they could not imagine by what perversion of justice they could be compelled, by the same authority, to re-purchase their lands or abandon them. The governor of New Hampshire, at first, remonstrated against this change of jurisdiction; but was, at length, induced to abandon the contest, and issued a proclamation recommending to the proprietors and settlers due obedience to the authority and laws of the colony of New York.

SECTION III.

Controversy with New York from 1764 to 1773.

The royal decree by which the division line between New Hampshire and New York was established, was regarded very differently by the different parties concerned. The settlers on the New Hampshire grants considered that it only placed them *hereafter* under the jurisdiction of New York, and to this they were willing to submit; but they had no idea that their titles to their lands, or that any past transactions, could be affected by it. Had the government of New York given the royal decision the same interpretation, no controversy would ever have arisen. The settlers would have acknowledged its jurisdiction and submitted to its authority without a murmur. But that government gave the decision a very different construction. It contended that the order had a *retrospective* operation, and decided not only what should thereafter be, but what had always been, the eastern limit of New York, and consequently, that the grants made by New Hampshire were illegal and void.

With these views, the government of New York proceeded to extend its jurisdiction over the New Hampshire grants. The settlers were called upon to surrender their charters, and re-purchase their lands under grants from New York. Some of them complied with this order, but most of them peremptorily refused. The lands of those who did not comply were therefore granted to others, in whose names actions of ejectment were commenced in the courts at Albany, and judgments invariably obtained against the settlers and original proprietors.

The settlers soon found that they had

nothing to hope from the customary forms of law, and therefore determined upon resistance to the unjust and arbitrary decisions of the court, till his Majesty's pleasure should be further known. Having fairly purchased their lands of one royal governor, they were determined not willingly to submit and re-purchase them, at an exorbitant price, of another; and when the executive officers of New York came to eject the inhabitants from their possessions, they met with avowed opposition, and were not suffered to proceed in the execution of their business.

For the purpose of rendering their resistance more effectual, various associations were formed among the settlers; and, at length, a convention of representatives from the several towns on the west side of the mountains, was called. This convention met in the fall of 1766, and, after mature deliberation, appointed Samuel Robinson, of Bennington, an agent to represent, to the Court of Great Britain, the grievances of the settlers, and to obtain, if possible, a confirmation of the New Hampshire grants. The actions of ejectment were, however, still going on in the courts at Albany, but no attention was paid to them by the settlers, nor was any defence made; but the settlers were very careful that none of the decisions of the court should be carried into execution.

On the 3d of July, 1766, the colonial assembly of New York had passed an act erecting a portion of the territory covered by the New Hampshire grants into a new county, by the name of Cumberland,* and making provision for building therein a court house and jail, to be located at Chester; but in consequence of the representations made by Mr. Robinson at the British Court, his Majesty in council, was pleased, on the 26th of June, 1767, to issue an order annulling this act of the provincial legislature; and on the 24th of July following another special order was obtained, prohibiting the governor of New York, upon pain of his Majesty's highest displeasure, from making any further grants whatsoever of the lands in question, till his Majesty's further pleasure should be known concerning the same.†

But before Mr. Robinson had fully accomplished the business of his mission in England, he was so unfortunate as to take the small-pox, of which distemper he died at London, in October, 1767, and it is not known that a detailed account of his proceedings was ever transmitted to

* See part third, article Cumberland County.

† Slade's Vermont State Papers, p. 20.

TERRITORY DIVIDED INTO COUNTIES.

SURVEYS ATTEMPTED.

the people on the New Hampshire grants, who had made him their agent.

Notwithstanding the annulling of the act of the provincial legislature above mentioned, and the prohibition contained in the order of the 24th of July, 1767, the government of New York continued to make grants, and to proceed in carrying out their designs in the division of the territory into counties. They had already established a court of common pleas, and appointed judges in the county of Cumberland, when, on the 2d of December, 1767, they received official notice of the annulling of the act by which that county was established. But instead of desisting, in obedience to the royal decree, they, with the advice of the Attorney General, on the 20th of February, 1768, re-passed the act which had just been annulled, and proceeded in the organization of the county.

The courts for Cumberland county were held at Chester for four or five years, but no county buildings were erected. In 1772, upon the recommendation of the supervisor of the county, the county seat was removed to Westminster, and a court house and jail erected. A portion of the inhabitants was disposed to acquiesce in the jurisdiction of New York, while another portion was equally, and even more, disposed to resist, and this state of things continued, as will be seen in the subsequent pages, for some time after the declaration of the independence of Vermont in 1777.

The county of Cumberland extended northerly to the south line of the towns of Tunbridge, Strafford and Thetford.

The territory lying north of this county and east of the Green Mountains, was, on the 7th of March, 1770, erected into a county by the name of Gloucester, and the county seat soon after fixed at Newbury. This county, at the time of its establishment, was said to contain about 700 inhabitants, who were generally opposed to the jurisdiction and authority of New York. In 1772 another county was constituted on the west side of the mountain, by the name of Charlotte. It was bounded south by the north line of Sunderland and Arlington and a line extending westward thence to Hudson river, and included all the country to the northward, on both sides of lake Champlain, to Canada line. The county seat was fixed at Skeensborough, now Whitehall, and Philip Skeene was appointed one of the judges of the court of common pleas. All that part of Vermont on the west side of the mountain lying south of this county was included in the county of Albany.

This organization of counties continued till the declaration of the independence of Vermont in 1777.

In 1769 the council of New York had decided that the King's order "Did not extend to prevent the governor from the granting of any lands which had not been previously granted by New Hampshire." The governor had, therefore, continued to make new grants to his favorites and friends; nor did he confine his grants, agreeably to the decision of the council, to the ungranted lands, but in many cases regranted such as were already covered by New Hampshire charters. But while the success of Mr. Robinson's mission to England had hardly served as a temporary check upon the proceedings of New York, it inspired the settlers on the grants with new confidence in the justice of their cause, and gave them strong grounds to hope that their rights would be eventually acknowledged and protected by the Crown.

In the meantime, the efforts of the claimants under New York to get possession of the lands were unremitting. Surveyors were sent on to allot them, but these, when discovered by the settlers, were not permitted to proceed. In October, 1769, a party of New York surveyors was observed to be running a line across the farm of Mr. James Breckenridge, in Bennington, and being forbidden to proceed by Breckenridge and others, who had collected at the place, they desisted, and went home. Whereupon, Abraham Ten Broek, one of the proprietors of the patent of Walloomscoik,* petitioned the governor and council of New York, setting forth that the commissioners and surveyors for dividing that patent had been "riotously opposed by sundry persons, and prevented by their threats from executing the trust reposed in them." The governor issued his proclamation, "for apprehending the principals and ring-leaders," and at the following January term of the court at Albany, the Rev. Jedediah Dewey, Joseph Robinson, Elijah Fay, Thomas Henderson, Ebenezer Robinson, and John Stewart were indicted as rioters, but none of them were arrested, or brought to trial.

In this state of things, the settlers, on the 18th of October, 1769, petitioned the governor and council of New Hampshire to interpose with the Crown in their behalf, and again on the 24th of the same month. The last of these petitions was signed by Samuel Safford for Bennington,

* This is said to be a Dutch word, signifying Wallum's patent. It is uniformly written *Walloomscoik* in all the N. Y. records.

DEFENCE AT ALBANY.

MILITIA ORDERED OUT.

Benjamin Gardner for Pownal, Jehiel Hawley for Arlington, Benjamin Purdy for Manchester, Thomas Barney for Sunderland, and Benjamin Colvin for Shaftsbury. In the meantime, the government of New York continued to make grants, and actions of ejectment against the settlers continued to be brought in the court at Albany; and Ethan Allen, afterwards so distinguished, first coming to reside in the grants about this time, undertook the defence of the New Hampshire grantees in the actions brought against them. He proceeded to New Hampshire, procured the necessary documents from the colonial government there, engaged the services of Mr. Ingersoll, an eminent lawyer in Connecticut, and in June, 1770, they appeared before the court at Albany, and the trial of Josiah Carpenter, of Shaftsbury, came on. The counsel for the defendant produced to the court the documents above mentioned, among which were the charter of the township and the defendant's deed from the original proprietors. But these were immediately set aside by the court, on the alleged ground that the New Hampshire grants were illegal, and a verdict was readily obtained against the defendant.

Two other cases being tried with like results, no further defence was made before the court. And it is related that before Allen left Albany, he was called upon by the attorney general and some others, who told him that the cause of the settlers was desperate, and urged him to go home, and persuade his Green Mountain friends to make the best terms they could with their new landlords, reminding him of the proverb that *might often prevails against right*. Allen coolly replied to them, that *the gods of the vallies are not the gods of the hills*; and when asked by Kemp, the King's attorney, to explain his meaning, he only added, that if he would accompany him to Bennington, the sense would be made clear.

When the news of the proceedings at Albany reached the grants, it created loud murmurs of discontent among the people. A convention of the settlers was held at Bennington, in which it was "Resolved, to support their rights and property which they possessed under the New Hampshire grants, against the usurpation and unjust claims of the governor and council of New York, BY FORCE, as law and justice were denied them." Having thus appealed to the last arbiter of disputes, their resolution was followed by a spirited and determined resistance of the authority of New York, in consequence of which several of the settlers

were indicted as rioters; but the officers sent to apprehend them "were seized by the people," says a writer of that period, "and severely chastised with *twigs of the wilderness*."

At this period, and for sometime afterwards, one of the most efficient supporters of the authority of New York was John Munro, who was proprietor of a patent under that province, lying upon White Creek, and extending into what is called Shaftsbury Hollow. He held the office of justice of peace for the county of Albany, and resided on his patent near the west line of Shaftsbury. He had about him a number of tenants and dependants, and by his boldness and energy of character was very troublesome to the New Hampshire grantees. By his assistance, the sheriff of Albany county surprised and arrested Silas Robinson in Bennington, early in the morning of the 29th of November, 1770, and succeeded in conveying him to Albany, where he was imprisoned. At the January term of the court in 1771 he was indicted as a rioter, and kept in jail till October, when he was liberated on bail. Simeon Hathaway, Moses Scott, and Jonathan Fisk were also indicted, but none of them were arrested.

Whenever the sheriff appeared upon the grants for the purpose of arresting rioters, or ejecting the settlers, he was sure to be met by a party larger than his own, fully determined to frustrate his object. Being required to serve a writ of ejectment on James Breckenridge, the sheriff, by order of the governor, called to his assistance a *posse* of 750 armed militia. The settlers having timely knowledge of his approach, assembled to the number of about 300, and arranged their plans to resist him. An officer with 18 men was placed in the house,—120 men behind trees near the road by which the sheriff must advance, and the remainder were concealed behind a ridge of land within gun shot of the house; and the forcing the door by the sheriff was to be made known to those concealed without by raising a red flag at the top of the chimney.

When the sheriff approached all were silent, and he and his men were completely within the ambuscade before they discovered their situation. Mr. Ten Eyck, the sheriff, went to the door, demanded entrance as sheriff of the county of Albany, and threatened, on refusal, to force it. The answer from within was, "*attempt it, and you are a dead man*." On repeating his demand, with a threat of using force, he received for a second an-

DECREES OF CONVENTION.

MILITARY ASSOCIATION.

BAKER TAKEN.

swer—*hideous groans*; and at the same time the two divisions exhibited their hats on the points of their guns, which made them appear much more numerous than they really were. The sheriff and his *posse* seeing their dangerous situation, and *not* (says Ira Allen) *being interested in the dispute*, made a hasty retreat, without a shot being fired on either side.

The New York claimants finding that the militia of Albany county could not be relied upon to act against the settlers, they now sought to accomplish their object by other means. By making favorable offers of titles under New York to some prominent individuals on the grants, by conferring offices on others, and by encouraging persons from New York to settle upon the unoccupied lands which had been granted by New Hampshire, they hoped to divide the people, and render the New York interest predominant.

To thwart these plans of their enemies, committees of safety were organized in the several towns, and a convention of the settlers on the grants was assembled, which decreed, among other things, that no officer from New York should be allowed, without permission of the committee of safety, to carry any person out of the district of the New Hampshire grants, and that no surveys should be made, nor lines run, nor settlements made under New York, within the same. The violation of this decree was to be punished at the discretion of a court formed by the committees of safety or elders of the people. At the same time the civil officers were to be allowed to exercise their proper functions in collecting debts and other matters not connected with the controversy.

To carry out these measures, and be in readiness in case of emergency, a military association was formed, of which Ethan Allen was appointed Colonel Commandant; and Seth Warner, Remember Baker, Robert Cochran, Gideon Warner, and some others, were appointed Captains. Under these, the people of the grants armed, and occasionally met for military exercise and discipline. Of this organization Gov. Tryon was apprized early in 1772, by a letter from John Munro, in which he says: "The rioters have established a company at Bennington, commanded by Capt. Warner, and on new year's day his company was reviewed, and continued all day in military exercise and firing at marks."

In pursuance of the New York policy before mentioned, settlements were made in the western parts of Rupert and Pawlet by persons who had armed themselves

in defiance of the New Hampshire grantees. In October, 1771, Ethan Allen, Remember Baker, and Robert Cochran, with six others, inhabitants of Rupert, all well armed, proceeded to warn off the intruders, who, finding opposition vain, fled to New York, and the log houses which they had erected "were pulled down, laid in heaps, and burned with fire."

Alexander McNaughton, a New York justice of the peace, upon this issued a warrant for the apprehension of the persons above mentioned as rioters, but at the same time wrote to the governor of New York that their situation among the mountains was such that no sheriff or constable could take them; and recommended that a reward be offered for their apprehension. Accordingly, on the 27th of November, the governor, by advice of his council, put forth a proclamation, offering a reward of £20 each for the apprehension of Cochran, Allen, Baker, and the six others.

In February, 1772, the sheriff of Albany county came to Rupert with the governor's proclamation, but did not succeed in taking any of the persons concerned in the alleged riotous proceedings. On his return, he reported to the governor that the rioters had retired, but from the conduct of those at home, not concerned in the riot, "he found the greatest appearance of a determined resolution not to submit to the government, and this he found particularly verified by the conduct of eight or nine, who were armed with guns and clubs, in which manner they came to the house of one Harmon near Indian river, where he then was, and from their conduct it plainly appeared what they intended."

Shortly after this John Munro, the New York justice already mentioned, moved by the hope of the reward and the desire of notoriety, resolved to attempt the capture of one of the most prominent of the rioters. Having assembled ten or twelve of his friends and dependants, on the 22d of March, 1772, before daylight, being Sunday morning, he proceeded to the house of Remember Baker in Arlington for the purpose of arresting him. Baker was awakened by the breaking open of his door, and the entrance of a number of men armed with swords and pistols. The intruders rushed upon him with savage fury, wounding him by a cut across the head, and also on the arm, with a sword. His wife too was barbarously wounded by a sword cut across the head and neck, and one of his boys also, then about 12 years old. Baker being overpowered and bound

BAKER RESCUED.

was thrown into a sleigh and conveyed off with the greatest speed towards Albany.

The news of this transaction being sent by express to Bennington, ten men immediately mounted their horses for the purpose of intercepting the banditti and rescuing Baker. They came upon Munro and his party just before they reached the Hudson river, who on the first appearance of their pursuers abandoned their prisoner and fled. Baker was found nearly exhausted by his sufferings and the loss of blood. Having refreshed him and dressed his wounds, they carried him home to the no small joy of his friends and the whole settlement.

An account of this transaction was afterwards sent to the governor of New York by Munro, in which he represents the conflict at Baker's house as very desperate, and says "he has reason to be thankful to Divine Providence for the preservation of his life and that of his party." He says further that he should have succeeded in carrying Baker to Albany, "if he could have had ten men, who would have taken arms and obeyed his orders; but that *they all ran into the woods* when they ought to have resisted."

Shortly after this attack upon Baker, Munro made an attempt to arrest Seth Warner. Warner with a single friend was riding on horse-back in the vicinity of Munro's residence, and, being met by Munro and several of his dependants, a conversation ensued, in the midst of which Munro suddenly seized the bridle of Warner's horse and commanded the bystanders to aid in arresting him. Warner after vainly urging him to desist, struck Munro over the head with a dull cutlass and levelled him to the ground. Munro, though stunned and disabled for the time, received no permanent injury, and the spectators manifesting no disposition to interfere, Warner was permitted to proceed without further molestation.

The repeated aggressions of this kind aroused the settlers to a determination to maintain their ground at all hazards, and to expel every person who should be found upon the grants under the auspices of the N. Y. claimants. In this exasperated state of public feeling, news was received at Bennington that Gov. Tryon was ascending the North river with a body of troops, for the purpose of subduing and chastising the refractory Green Mountain Boys.* This

* It was about this time that the settlers of the New Hampshire Grants began to be called Green Mountain Boys. The name was first applied to the military but was soon extended to the settlers in general.

PREPARATIONS TO MEET GOV. TRYON.

report was at first credited and produced some alarm. The committees of safety and military officers met in convention and after a full consideration of their situation, finally resolved that "it was their duty to oppose governor Tryon and his troops to the utmost of their power."

Their resolution being thus taken, they next began to make preparations for an effectual resistance. Two cannon and a mortar, with powder and ball, were obtained from Hoosic fort and there was a general rally of the militia in Bennington and the neighboring towns. In order to ensure an effectual resistance, it was concluded to place some of their best marksmen at the narrow passes along the road from Albany to Bennington, for the purpose of shooting down the officers of the invaders as they advanced and producing disorder and dismay among their troops. In the mean time a trusty person was dispatched to Albany to ascertain the number, the movements and designs of the enemy and take note of their officers so as to be able to distinguish them again. This messenger shortly returned with the joyful intelligence that the troops were wind-bound in the river below Albany, and that they had no designs upon the Grants, but were destined for the military posts on the lakes: and thus were the settlers relieved from the necessity of putting their plans and their valor to the test.

During the preparations above-mentioned several persons on the Grants, who were in the New York interest, judging it unsafe for them to remain, fled to New York, and by their representations and by the intelligence received from Munro, governor Tryon seems to have been impressed with the difficulty of subjugating the settlers on the Grants, by force, and to have determined to try what could be done by negotiation. He accordingly wrote to the Rev. Mr. Dewey and the inhabitants of Bennington and the adjacent country, and, after censuring them for their illegal acts and expressing a strong desire to do them justice, he invited them to lay before him their grievances and causes of complaint, and engaged full security and protection to any persons they might send to New York on that business, excepting Allen, Warner and three others.*

Governor Tryon's letter was dated at New York, May 19th 1772. On the 5th of June, two answers were returned, one signed by a committee appointed for that purpose by the inhabitants of Bennington and vicinity, and consisting of Mr. Dewey

* This letter may be found in Slades Vt. State Papers, page 22.

CORRESPONDENCE WITH GOV. TRYON.

and others; and the other by the persons excepted in the governor's letter.* In these they proceed to show the legality of their titles to their lands under the grants of New Hampshire, and that their proceedings, which had been declared to be disorderly and riotous, were necessary and justifiable in defending themselves and property against the machinations of base and sordid land-jobbers; and express an earnest wish that His Excellency would assist to quiet them in their possessions "till His Majesty, in his royal wisdom shall be graciously pleased to settle the controversy."

These communications were forwarded by Capt. Stephen Fay and his son Mr. Jonas Fay, who were appointed agents on the part of the settlers of the New Hampshire Grants to deliver them to the governor of New York. They were kindly received by His Excellency and laid before the council. The council after mature deliberation reported favorably, and recommended that His Excellency afford all the relief in his power, by suspending till His Majesty's pleasure should be known, all prosecutions in behalf of the crown, on account of crimes with which the settlers stood charged, and recommend that the owners of disputed lands, claimed under New York titles, should suspend, during the same period, all civil suits concerning the same. This report of the council was approved by the governor and was immediately communicated to the people of the Grants, by their agents.

When intelligence of this result reached Bennington, it diffused universal joy through the settlement. The remembrance of their former griefs and sufferings, was, for the moment, swept away in the overflowing enthusiasm for governor Tryon. On the 15th of July, 1772, the committee which had replied to the letter of the governor of New York, together with a vast concourse of people, assembled at the meeting-house in Bennington, and their agents then laid before them the results of their mission to New York. The manner in which it was received may be best understood from the report, made by these agents shortly after to governor Tryon.

"We, as messengers, laid before the above committee an extract of the minutes of His Majesty's Council of the province of New York of the 2d instant, together with His Excellency governor Tryon's letter of the same date, directed to the inhabitants of Bennington, &c. and after reading the same, the above committee

* These may be found in Slade's Vt. State Papers, page 24 and 25.

PROCEEDINGS AT OTTER CREEK.

and a numerous concourse of the inhabitants of the adjacent country and other spectators, gave a full and unanimous vote in favor of the papers aforesaid; and the thanks of the people were presented to us for our diligence in procuring these papers. Peace was also recommended on the whole New Hampshire Grants, by all who were present; when the whole artillery of Bennington, with the small arms were several times discharged in honor of the governor and council of New York.—Health to the king—Health to governor Tryon—Health to the council of New York—Universal peace and plenty, liberty and prosperity, by sundry respectable gentlemen, some of whom were from neighboring provinces.

STEPHEN FAY,
JONAS FAY."*

During these transactions at New York, intelligence was brought to Bennington that Mr. Kockburn, a noted surveyor in the employment of New York claimants, was engaged in laying out land in some of the northern townships. Ethan Allen collected a small party, went in pursuit of the surveyor, overtook him, broke his instruments and made him prisoner. He was brought to Castleton, tried and sentenced to banishment, and was to suffer death if caught within the Grants, but at this juncture hearing of the success of the mission to New York, they rescinded their harsh sentence, and dismissed the surveyor.

During this expedition, Allen's party dispossessed the tenants of an intruder at the lower falls on Otter Creek, where Vergennes now stands. The lands here had been granted by New Hampshire in 1761, and a settlement commenced under said grant, and a saw-mill erected as early as 1769. Shortly after, Col. Reed, claiming under a subsequent grant from New York, forcibly drove off the New Hampshire settlers and put his own tenants in possession. They had extended the settlement, erected several log-houses and a grist-mill. These were in turn ordered off by Allen, their houses burnt, their mill-stones broken by being thrown over the falls, and Pangborn, the New Hampshire proprietor, again put in possession of his saw-mill.

Intelligence of these transactions soon reached governor Tryon, who, on the 11th of August, 1772, addressed a letter of sharp rebuke to the inhabitants of the Grants and required them forthwith to put Col. Reed's tenants "into re-possession."

* This document may be found in the 11th No. of the Historical Readings, published in the State Banner of July 20, 1841, and was copied from the original on file at Albany.

sion of their lands and tenements." On the reception of this letter, the committees of the several towns assembled at Manchester, and on the 27th of August a bold and decisive, but conciliatory answer was prepared, in which they contended, that there was no breach of faith on their part, because none was plighted till after those transactions, when on the 15th of July, the proposition of governor Tryon was accepted, and that the aggressors were the New York claimants, who had undertaken to survey and take possession of the disputed domain, declaring unequivocally their determination neither to break articles of public faith, insult governmental authority, nor abandon their property to the mercy of New York land-jobbers. They, moreover, declined restoring Col. Reed's tenants their possessions, not doubting that when His Excellency came to understand that they were really intruders, he would approve their conduct."

To the above-mentioned communication an answer from the governor was respectfully requested, but it does not appear that he saw fit to comply; and this abortive attempt at reconciliation seems only to have widened the breach and increased the animosity between the parties. New York now resorted to the expedient of appointing several prominent settlers to office for the purpose of buying them over to their interests. To counteract these designs and to provide for an effectual resistance to the *Yorkers*, a convention was assembled at Manchester, on the 21st of October, 1772, which, among other things, decreed that no person on the Grants should accept or hold any office under the authority of New York: "and all civil and military officers, who had acted under the authority of New York were required to suspend their functions on the pain of being viewed."† It was also decreed "that no person should take grants, or confirmation of grants, under the government of New York."

Punishment for the infraction of these decrees was left to the discretion of the court, except that it must not be capital for the first offence.

SECTION IV.

Controversy with New York from 1773 to 1775—Minatory act of New York—Resolutions and remonstrance of the settlers.

In July, 1773, Col. Reed, whose tenants had been dispossessed at the lower falls on Otter Creek, as mentioned in the

preceding section, induced a number of Scotch emigrants, who had lately arrived at New York, to accompany him to Otter Creek for the purpose of re-possessing the property which he claimed there. On their arrival the New Hampshire settlers were a second time compelled to abandon the place, and Col. Reed, having repaired the grist-mill and re-instated the mill stones by means of hooping them, left the Scotchmen, with orders to keep possession and continue the improvements.

Intelligence of these transactions soon reached Bennington, whereupon Ethan Allen, Seth Warner, Remember Baker, and a number of others immediately proceeded to the place for the purpose of again dispossessing the New York intruders and restoring the rightful owners. They compelled the miller to break the mill-stone into small pieces with a sledge and throw them down the falls, and commanded them not to repair the mill again "on pain of suffering the displeasure of the Green Mountain Boys." The Scotch settlers, who had not removed their families from New York, on hearing the nature of the controversy, declared they had been deceived, and abandoning all claim to the lands, retired, and afterwards settled on the Mohawk river.

To prevent a recurrence of these scenes, Allen and his party caused a small block-house to be erected at the falls, which was garrisoned by a few men and subsequently afforded full protection to these settlements against the "Yorkers." At this period the rich lands on the Winooski, or Onion river, were attracting much attention, and several persons in and about Bennington, and others in Connecticut, had made purchases there under New Hampshire titles; and there is a tradition that the intelligence of Col. Reed's second intrusion was conveyed to Bennington by Ira Allen, who returning from exploring those lands preparatory to a settlement, and arriving at the falls on Otter Creek on a dark and stormy evening, sought shelter and refreshment at the settlement there, which was then the most northerly on the west side of the mountains. He knocked at the door and instead of being met by his friends, who had been re-instated by the Green Mountain Boys, as mentioned in the preceding section, was met by the thrust of a sword in the hand of some person within, which luckily did him no injury. After making known his condition he was admitted but to his surprise he found the place in possession of a number of Scotchmen. Here he passed the night and then proceeded to Bennington with the intelligence.

* For Gov. Tryon's letter and the reply, see *Slade's Vt. State Papers*, pages 22-23.

† Allen's *History of Vermont*.

BLOCK-HOUSES BUILT.

RESOLUTIONS OF NEW YORK ASSEMBLY.

After having secured the New Hampshire settlers in their possessions on Otter Creek, and with a view to prevent the intrusion of New York claimants upon the lands on the Winooski river, Allen and Baker proceeded thither, with their men and erected a blockhouse near the lower falls on that stream. It stood on the Colchester side of the river, in the midst of what is now called "Winooski Village;" and had 32 port-holes, in the upper story. The settlement upon this river was commenced the next year, 1774, and upon the breaking out of the revolution, in 1775, the block-house, being furnished with arms and ammunition, afforded the settlers shelter and protection till the settlement was abandoned in 1776.

In consequence of the second expulsion of Col. Reed's tenants, governor Tryon applied to general Haldimand, the military commander-in-chief, for a military force to protect the New York claimants in their possessions, but the general, doubting the propriety of employing the regular troops for such a purpose, refused to comply with His Excellency's wishes.

Clarendon and vicinity was settled by people, who were generally in favor of New York. Those in the south part of Clarendon held their lands under deeds from Col. Henry H. Lydius, who pretended to derive his title from governor Pownall of Massachusetts, and their township was called Durham. The north part of Clarendon and a part of Rutland had been granted by New York under the name of Social-borough. Some of the principal men of Durham and Social-borough having accepted offices and thus recognized the jurisdiction of New York, and frequent disturbances having arisen in that quarter, in the fall of 1773, Allen and Baker raised a force of 100 men for the purpose of compelling the Durhamites, as they were called, either by terror or force to recognize the New Hampshire title. On the advance of this force they, who held offices under New York, fled. Allen and his party remained several days, and after sundry exhortations and threatenings, returned without inflicting any serious injury upon the persons or property of the inhabitants.

The leaders of the Durhamites fled to New York, and laid before the governor and council a full statement of the outrages committed by what they were pleased to call the "Bennington mob." The government of New York regarded these outrages as open acts of treason and rebellion, which could no longer be endured. They looked upon the Green Mountain Boys as a lawless banditti, and, confiding in their

own strength, and miscalculating the power and resistance of a few determined spirits acting on the defensive and driven to desperation, they resolved to bring them to merited punishment. For this purpose they proceeded to adopt measures "the most minatory and despotic of any thing which had ever appeared in the British Colonies."

A committee of the general assembly of New York, on the 5th day of February, 1774, passed several resolutions, expressive of their opinion of what they were pleased to call the lawless and riotous proceedings of the "Bennington Mob;" and, among other things, they desired his Excellency, the governor to offer, by proclamation, a reward for apprehending and securing the ringleaders, in those transactions, in the jail at Albany. This committee also recommended that a law should be passed, the object of which should be, more effectually "to suppress riotous and disorderly proceedings, and to bring offenders to condign punishment."*

A knowledge of the doings of this committee having reached the settlers, through the public prints, a general meeting of the committees of the several townships, was held at the house of Eliakim Wellers, in Manchester, March 1st, 1774, and afterwards by adjournment, at Jehial Hawley's in Arlington, on the 3d Wednesday of the same month.† At this meeting, was drawn up a sketch of the proceedings previous to this period, and, after recommending to the government of New York to wait the determination of his Majesty, before proceeding to further extremities, it was resolved, "that as a country, we will stand by and defend our friends and neighbors who are indicted at the expense of our lives and fortunes." It was also resolved "that for the future every necessary preparation be made, and that our inhabitants hold themselves in readiness, at a minute's warning, to aid and defend those friends of ours, who, for their activity in the great and general cause, are falsely denominated rioters." It was at the same time agreed, that they should act only on the defensive, and should encourage the execution of the laws in civil cases, and also in criminal prosecutions "that were so indeed."

While the convention of the New Hampshire grants was discussing and adopting these resolutions, the general assembly of New York was proceeding to carry into effect the resolutions of the 5th of February; and on the 9th of March,

* For these Resolutions see Slade's Vermont State Papers, page 37.

† For these proceedings, see Slade's S. P. p. 38.

EXTRAORDINARY LAW.

1774, they enacted a law which put an end to all prospects of reconciliation.* This extraordinary law, (which is of too great length to be inserted entire,) enacted, among other things equally sanguinary and despotic,—that if any person, or persons, oppose any civil officer of New York, in the discharge of his official duty, “or wilfully burn or destroy, the grain, corn or hay, of any other persons being in any inclosure; or if any persons unlawfully, riotously and tumultuously assembled together to the disturbance of the public peace, shall, unlawfully and with force, demolish, or pull down, or begin to demolish, or pull down any dwelling-house, barn, stable, grist-mill, saw-mill, or out-house, within either of the said counties of Albany and Charlotte; that then each of said offences shall be adjudged felony, without benefit of clergy, and the offenders therein shall be adjudged felons, and shall suffer death, as in cases of felony, without benefit of clergy.”

It was made the duty of the governor to publish the names of such persons, in the public papers, as were indicted in either of the counties of Albany, or Charlotte, for any offence made capital by this or any other law, with an order in council commanding such offender, or offenders, to surrender themselves respectively, within the space of seventy days next after the publication thereof. This order was to be forwarded to the sheriffs and posted up in several public places. “And in case such offenders shall not respectively surrender themselves, he or they, so neglecting, or refusing, shall from the day appointed for his surrendry, as aforesaid, be adjudged, deemed and, (if indicted for a capital offence hereafter to be perpetrated,) convicted of felony, and shall suffer death, as in cases of persons convicted of felony by verdict and judgment, without benefit of clergy.”

All crimes committed on the grants, were, by this act, permitted to be tried in the county, and by the courts of Albany; and the courts were empowered by it, to award execution against such as should be indicted for capital offences, and who should not surrender themselves in conformity to the order of the governor and council, in the same manner as if they had been convicted on a fair and impartial trial. A proclamation was at the same time issued by the governor of New York, offering a reward of £50 each for apprehending and securing Ethan Allen, Seth Warner, Remember Baker, Robert Cochran, Peleg Sunderland, Sylvanus Brown,

For this law, see Slade's St. P. page 42.

REMONSTRANCES OF THE SETTLERS.

James Brackenridge, and James Smith, whom they considered the most obnoxious of the settlers.

We have already observed that the passage of the foregoing law put an end to all prospects of reconciliation, or submission to the claims of New York. It was regarded by the settlers on the New Hampshire grants, as originating solely in the avarice of a set of unprincipled speculators, who coveted their lands with their valuable improvements; and as designed to terrify them into submission. They were satisfied that the popular sentiment was in their favor, that the great body of the people of New York felt no interest in enforcing the claims of that province to the lands in question, and former experience had proved that the militia could not be brought to act against them with any effect.

Under such circumstances, the threatenings and arbitrary laws of that government were far from inspiring terror. They were rather regarded by the settlers with contempt, and, instead of palsying, they tended to nerve the arm of resistance. Indeed, the idea of submission seems never, for a moment, to have been entertained by these brave and determined veterans. Having been long inured to toils and hardships, they were prepared to encounter difficulties and dangers with unflinching resolution and firmness. And so very highly did they prize their personal rights and liberties, that, rather than surrender them to the arbitrary claims of New York, they almost unanimously, resolved to meet death, if necessary, in their defence.

These views and feelings are fully manifested in the remonstrance which they made against the foregoing law, as will appear from a few brief extracts, taken from that fearless and spirited production. After portraying, in their peculiar style, the character of the New York government, they proceeded to say, “that by legerdemain, bribery and deception, they have extended their dominions far and wide. They have wrangled with, and encroached upon, the neighboring governments, and have used all manner of deceit and fraud to accomplish their designs. Their tenants groan under their usury and oppression, and they have gained, as well as merited, the disapprobation and abhorrence of their neighbors. The innocent blood they have already shed, calls for Heaven's vengeance on their guilty heads; and, if they should come forth in arms against us, thousands of their injured neighbors will join with us, to cut off and exterminate such an exe-

REMONSTRANCE OF THE EXCEPTED PERSONS.

WESTMINSTER MASSACRE.

crable race of men from the face of the earth."

Again, says that document: "we therefore advertise such officers, and all persons whatsoever, that we are resolved to inflict *immediate death* on whomsoever may attempt the same; (that is, the apprehension of any of the persons indicted as rioters.) And provided any of us, or our party shall be taken, and we have not notice sufficient to relieve them; or whether we relieve *them* or not, we are resolved to surround such person, or persons, as shall take them, whether at his, or their own house, or houses, or any where that we can find him, or them, and *shoot such person, or persons, dead*. And furthermore, we will *kill and destroy* any person or persons whomsoever, that shall presume to be accessory, aiding or assisting in taking any one of us, as aforesaid; for, by these presents, we give any such disposed person, or persons, to understand, that although they have a license by the law aforesaid, to *kill us*; and an 'indemnification' for such murder, from the same authority, yet they have no indemnification for so doing from the *Green Mountain Boys*; for our lives, liberties and properties are as verily precious to us as to any of the king's subjects: but if the governmental authority of *New York* insist upon *killing us*, to take possession of our "*vineyards*"—let them come on; we are ready for a game of scalping with them, for our martial spirits glow with bitter indignation and consummate fury, to blast their infernal projects."

The remonstrance, from which the foregoing are extracts, was dated the 26th day of April, 1774, and signed by Ethan Allen and six others. About this time a plan was concerted to avoid the jurisdiction of New York, by having the New Hampshire grants, and that part of New York lying east of Hudson river, erected into a separate royal government. To effect this object, Philip Skeen, a colonel in one of the king's regiments, and the owner of large possessions on lake Champlain, went over to Great Britain, and seems to have met with some success; but nothing decisive had been done when the revolution commenced, which put an end to the negotiation.

The opposition to the claims of New York had hitherto been confined, principally, to the inhabitants on the west side of the mountains. The settlers on the grants in the vicinity of Connecticut river, had, many of them, surrendered their original charters, and had taken new ones under the authority of New York. In several of the towns they submitted qui-

etly to the jurisdiction of that colony, and stood, in a measure, unconcerned spectators of the controversy in which the settlers on the more westerly grants, were so deeply involved. And where this was not the case, they had not yet been driven to desperation by the executive officers of New York. They were not, however, indifferent to the policy of Great Britain towards her American Colonies. The settlers on the New Hampshire grants were, generally, emigrants from the other New England provinces, and they readily sympathized with their kindred and friends, and were by no means backward in imbibing the growing spirit of opposition to the oppressive and arbitrary measures pursued by the mother country towards her colonies.

The affairs of the colonies had assumed so alarming an aspect, that delegates from most of the provinces met at Philadelphia on the 5th of September, 1774, to consult upon measures for the common safety. The meeting of this congress was followed by an almost universal suspension of the royal authority in all the colonies, excepting New York, which refused its assent to the measures recommended by that body, and the courts of justice were either shut up or adjourned without doing any business. The first interruption of this kind in the colony of New York, happened in the county of Cumberland, on the New Hampshire grants.

The stated session of the court for that county was to have been holden at Westminster, on the 13th of March, 1775. Much dissatisfaction prevailed in the county because New York had refused to adopt the resolves of the continental Congress, and exertions were made to dissuade the judges from holding the court. But, as they persisted in doing it, some of the inhabitants of Westminster and the adjacent towns, took possession of the court house at an early hour in order to prevent the officers of the court from entering. The court party soon appeared before the court house, armed with guns, swords and pistols, and commanded the people to disperse. But, as they refused to obey, some harsh language passed between them, and the court party retired to their quarters.

The people then had an interview with judge Chandler, who assured them that they might have quiet possession of the house till morning, when the court should come in without arms, and should hear what they had to lay before them. But, contrary to this declaration, about eleven o'clock at night, the sheriff, with the other officers of the court, attended by an

RESOLUTIONS AND REMONSTRANCES.

PROGRESS OF POPULATION.

armed force, repaired to the court house. Being refused admittance, some of the party fired into the house and killed one man* and wounded several others. The wounded men they seized and dragged to prison, with some others who did not succeed in making their escape.

By means of those who escaped, the news of this massacre was quickly spread, and before noon the next day, a large body of armed men had collected. A jury of inquest brought in a verdict, that the man was murdered by the court party. Several of the officers were made prisoners and confined in the jail at Northampton, in Massachusetts. But, upon the application to the Chief Justice of New York, they were released from prison and returned home.†

These proceedings aroused the spirit of opposition to New York throughout the grants on the east side of the mountains. A meeting of committees from the several townships was held at Westminster, on the 11th of April, 1775, at which a number of spirited resolutions were adopted relative to the late unhappy transactions. Among other things it was voted, "That it is the duty of the inhabitants, as predicated on the eternal and immutable law of self preservation, wholly to renounce and resist the administration of the government of New York, until such times as the lives and property of the inhabitants may be secured by it." A committee was also appointed, of which Ethan Allen was one, to remonstrate to the court of Great Britain against that government and to petition his Majesty, "to be taken out of so oppressive a jurisdiction and either annexed to some other jurisdiction, or incorporated into a new one."

Thus were the settlers on the east side

* William French. The following is a literal copy of the inscription on his monument in Westminster, furnished to the Compiler of the Vermont State Papers by the Hon. Wm. C. Bradley. It is preserved both as a literary curiosity and as exhibiting unequivocal indication of the spirit of the times.

In Memory of William French Son to Mr Nathaniel French Who Was Shot at Westminster March ye 13th 1775 by the hands of Cruel Ministerial tools of Georg ye 8d in the Courthouse at a 11 a Clock at Night in the 22d year of his Age—

Here William French his Body lies
For Murder his blood for Vengeance cries
King Georg the third his 'Tory crew
tho with a bawl his head Shot threw
For Liberty and his Countrys Good
he Lost his Life his Dearest blood

† A full account of these transactions was published by a committee appointed for that purpose, on the 23d of March, 1775, and may be found in Blaine's Vermont State Papers, page 55.

of the mountains driven to make common cause with their brethren on the west, in opposing the government of New York. The indignation of the settlers throughout the New Hampshire grants was now raised to the highest pitch, and probably the commencement of the American war at Lexington, on the 19th of April, was the only thing which prevented the parties proceeding to open hostilities. This event produced a shock which was felt throughout the colonies; local and provincial contests were at once swallowed up by the novelty, the grandeur and the importance of the contest thus opened between Great Britain and her American colonies.

SECTION V.

Progress of Settlement, character of the Settlers, and modes of punishment.

It has already been remarked that, although several establishments had been made in Vermont previous to that time, the commencement of the settlement may properly be dated from the conquest of Canada in 1760. In that year, the whole number of settlers on the territory of Vermont did not exceed 300 persons, and although the settlement began from that time sensibly to advance, it was by no means rapid till after the treaty of peace, in 1763, by which Canada was ceded to Great Britain. In 1764, settlements had been commenced in many of the townships on Connecticut river as far north as Newbury, and in several townships on the west side of the Green Mountains, in the county of Bennington.

In 1765, the government of New York, having acquired authority from the British crown to exercise jurisdiction over the New Hampshire grants as far eastward as Connecticut river, commenced the division of the territory into counties, as mentioned in section third. The division lines between the counties were, however, a matter of little consequence, towards the close of this period, for when the government of New York found the opposition to their measures so determined and so general among the settlers on the grants, they seem to have given the court of Albany county jurisdiction over the whole tract of country. This gave rise to the expression, *unlimited county of Albany*, so frequently used by the Vermont pamphleteers during the controversy with New York.

Previous to the year 1770, scarcely any settlements had been made on the west side of the Green Mountains to the northward of the present county of Benning-

CHARACTER OF THE SETTLERS.

ETHAN ALLEN.

SETH WARNER.

ton. During the next year, 1771, settlements were commenced in several townships in Rutland county, and this year was taken the first census of the inhabitants on the the grants on the east side of the mountains. By this enumeration it appears that Cumberland county contained, in 1771, 3,947 inhabitants, and Gloucester county 722, and it was estimated that these two counties contained at that time two thirds of the people in the whole district. The whole number of inhabitants must therefore have been about 7000.

No complete census was taken till the year 1791, and hence it is impossible to determine the precise population of Vermont at the time of the commencement of the American Revolution. But as the settlements were rapidly extending during the five years succeeding the year 1771, we may safely conclude, that the whole population of Vermont at the commencement of the war was at least 20,000. About the close of the war we find the population incidentally estimated by Doct. Williams at 30,000 souls.

The settlers on the New Hampshire grants were a brave, hardy, but uncultivated race of men. They knew little of the etiquette of refined society, were blessed with few of the advantages of education, and were destitute of the elegancies, and in most cases of the common conveniences of life. They were sensible that they must rely upon the labor of their own hands for their daily subsistence, and for the accumulation of property. They possessed minds which were naturally strong and active, and they were aroused to the exercise of their highest energies by the difficulties, which they were compelled to encounter. The controversy in which they were engaged involved their dearest rights. On its issue depended not only their titles to their possessions, but, in many cases, their personal liberty and safety. Though unskilled in the rules of logic, their reasoning was strong and conclusive, and they possessed the courage and perseverance necessary for carrying their plans and decisions into execution.

We have already observed that, at the head of the opposition to the proceedings of New York, stood Ethan Allen, a man obviously fitted by nature for the circumstances and exigencies of the times. Bold, ardent and unyielding, he possessed an unusual degree of vigor both of body and mind, and an unlimited confidence in his own abilities. With these qualifications, the then existing state of the settlement rendered him peculiarly fitted to become a prominent and successful leader. During the progress of the controversy,

Allen wrote and dispersed several pamphlets, in which he exhibited, in a manner peculiar to himself, and well suited to the state of public feeling, the injustice and cruelty of the claims and proceedings of New York. And although these pamphlets are unworthy of notice as literary productions, yet, they were at the time extensively circulated, and contributed much to inform the minds, arouse the zeal, and unite the efforts of the settlers.

The bold and unpolished roughness of Allen's writings were well suited to give a just description of the views and proceedings of a band of speculating and unprincipled land-jobbers. His method of writing was likewise well adapted to the condition and feelings of the settlers, and probably exerted a greater influence over their opinions and conduct, than the same sentiments would have done clothed in the chaste style of classic elegance. Nor did it differ greatly in style, or literary merit, from the pamphlets which came from New York. But although Allen wrote with asperity and freedom, there was something generous and noble in his conduct. He refrained from every thing which had the appearance of meanness, injustice, cruelty or abuse towards those who fell into his power, and protested against the same in others.*

Next to Allen, Seth Warner seems to have acted the most conspicuous part among the settlers. He, like Allen, was firm and resolute, fully determined that the decisions of New York against the settlers should never be carried into execution. But while Allen was daring and sometimes rash and imprudent, Warner was always cool, calm and comparatively cautious. After Warner was proscribed

* Ethan Allen was born at Litchfield, Conn. on the 10th of January, 1737. He married in Connecticut, came to Vermont himself about the year 1769 and spent most of his after life here, but his family did not come to Vermont till 1778, just before his return from captivity. He was taken prisoner at Montreal in the fall of 1775, and carried to England—was exchanged in May 1778—removed to Burlington in 1787, where he died of apoplexy on the 12th February 1789. His ashes rest beneath a plain marble slab in the beautiful cemetery near Winooski lower falls, having upon it the following inscription:—

“The
Corporeal Part
of

Genl. Ethan Allen

rests beneath this stone
the 12th day of Feb. 1789,
aged 50 years.

His spirit tried the mercies of his God
In whom he believed and strongly trusted.”

His true age was 52 years, one month and two days.

REMEMBER BAKER.

BEECH SEAL.

MODES OF PUNISHMENT.

as a rioter, as related in a preceding section, an officer from New York attempted to apprehend him. He, considering it an affair of open hostility, defended himself against the officer, and in turn attacked, wounded and disarmed him; but, with the spirit and generosity of a soldier, he spared his life.

After Ethan Allen and Seth Warner, no person on the New Hampshire grants, up to the close of this period, acted a more distinguished part, or was more serviceable to the settlers, than Remember Baker. He was the pioneer in many an enterprise and was always in readiness for any emergency. Being a joiner and mill-wright by trade, he built the first mills which were erected at Arlington and Pawlet, and was preparing in connexion with his cousin, Ira Allen, for the erection of mills at Winoski falls, when the war of the revolution commenced.*

During the protracted controversy in which these men acted so prominent a part, there had been, up to this time, frequent attempts to arrest it and bring it to an amicable settlement. Orders from the crown had likewise been often given to New York to suspend further prosecutions and make no more grants of the lands in dispute till his Majesty's further pleasure should be known respecting them. But in despite of royal orders and the remonstrances of the settlers on the grants, New York continued to assert and to endeavor to enforce her claims, and the repeated but vain attempts at reconciliation, served only to embitter the resentment of the contending parties and produce a state of hostility more decided and alarming.

The affairs of the inhabitants of the grants appear to have been managed during this period by committees appointed in the several towns, and who met in convention as occasion required, to adopt measures for the common defence and welfare. The resolutions and decrees of

these conventions were regarded as the law of the land, and their infraction was always punished with exemplary severity. The punishment most frequently inflicted was the application of the "beech seal" to the naked back, and banishment from the grants. This mode of punishment derived its significant name from allusion to the great seal of the province of New Hampshire, which was affixed to the charters of the townships granted by the governor of that province, of which the *beech rod* well laid upon the naked backs of the "Yorkers," and their adherents, was humorously considered a confirmation.



That the reader may have a just idea of the summary manner in which the convention and committees proceeded against those who violated their decrees, we will lay before them the sentence of Benjamin Hough, as a sample. It appears that Hough, who resided in the vicinity of Clarendon and who was a violent Yorker, went to New York in the winter of 1774, for the purpose of obtaining the aid of government against the Green Mountain Boys, and that on the 9th of March, the very day of the passage of the extraordinary law of which we have already spoken in the fourth section of this chapter, he accepted the appointment of justice of the peace for the county of Charlotte, under the authority of New York. On his return he proceeded to execute his new office within the grants, in defiance of the decree of the convention which forbade it. He was repeatedly warned to desist, but being found incorrigible, he was arrested and carried before a committee of safety

*As Capt. Baker was killed shortly after the close of this period, we would observe here that he was born at Woodbury, Ct. about 1740, served in the expedition against Canada in 1758; came to the Grants about 1761, was engaged in the reduction of Ticonderoga and Crown Point in the summer of 1775, and in August following, being sent by Gen. Montgomery to reconnoiter the enemy's position at St. John's, he was shot by an Indian. At some distance this side of St. John's, he landed and concealed his boat, and was about proceeding on foot, when he saw that his boat was already in possession of some Indians. He hailed them and demanded his boat, but as they paid no regard to the demand he drew up his gun and it missed fire, and at the next instant received a shot through the head from one of the Indians in the boat and fell dead upon the spot. His companions then fled and made their way back by land with the sad intelligence.

BENJAMIN HOUGH'S PUNISHMENT.

DR. ADAMS' PUNISHMENT.

at Sunderland.* The decree of the convention and the charges against the prisoner being read in his presence, he acknowledged that he had been active in promoting the passage of the law above mentioned and in the discharge of his duties as magistrate, but pleaded the jurisdiction of New York over the Grant, in justification of his conduct. This plea having no weight with the committee, they proceeded to pronounce upon him the following sentence, viz. "*That the prisoner be taken from the bar of this committee of safety and be tied to a tree, and there, on his naked back, receive two hundred stripes; his back being dressed, he should depart out of the district, and on return, without special leave of the convention, to suffer death.*" This sentence was forthwith carried into execution, with unsparing severity, in the presence of a large concourse of people. Hough asked and received the following written certificate of his punishment, signed by Allen and Warner:

"SUNDERLAND, 30th of Jan., 1775.

This may certify the inhabitants of the New Hampshire Grants, that Benjamin Hough hath this day received a full punishment for his crimes committed heretofore against this country, and our inhabitants are ordered to give him, the said Hough, a free and unmolested passport toward the city of New York, or to the westward of our Grants, he behaving himself as becometh. Given under our hands the day and date aforesaid.

ETHAN ALLEN,
SETH WARNER."

On the delivery of the paper, Allen sarcastically observed that the certificate, together with the receipt on his back, would no doubt be admitted as legal evidence before the supreme court and the governor and council of New York, though the king's warrant to Gov. Wentworth and his excellency's sign manual with the Great Seal of the province of New Hampshire, would not.

Hough repaired immediately to the city of New York, where he gave, under oath, a minute account of the transactions above

mentioned,* and this matter, together with the particulars of the transactions at Westminster on the 13th of March, was made the subject of a special message to the colonial assembly by Lieut. Gov. Colden. The Assembly, after discussing these subjects on the 30th and 31st of March, finally resolved to appropriate £1000 for the maintenance of justice and the suppression of riots in the county of Cumberland, and that a reward of £50 each be offered for apprehending James Mead, Gideon Warren and Jesse Sawyer, and also a reward of £50 each, in addition to the rewards previously offered, for the apprehension of Ethan Allen, Seth Warner, Robert Cochran and Peleg Sunderland. These resolutions constituted the last and dying efforts of the royal government of New York against the New Hampshire Grants. The assembly was soon prorogued and never met again, being superseded by the revolutionary authority of the provincial congress.

Although the application of the beach seal was the most common punishment, others were frequently resorted to. Some of these were in their nature trifling and puerile. The following may serve as a specimen. A Dutchman of Arlington became a partisan of New York and spoke in reproachful terms of the convention and of the proceedings of the Green Mountain Boys. He advised the settlers to submit to New York, and re-purchase their lands from that government. Being requested to desist, and disregarding it, he was arrested and carried to the Green Mountain tavern in Bennington. The committee, after hearing his defence, ordered him "to be tied in an armed chair, and hoisted to the sign, (*a catamount's skin, stuffed, sitting upon the sign post twenty-five feet from the ground with large teeth, grining towards New York,*) and there to hang two hours in sight of the people, as a punishment merited by his enmity to the rights and liberties of the inhabitants of the New Hampshire Grants." This sentence was executed to the no small merriment of a large concourse of people; and when he was let down he was dismissed by the committee with the exhortation to "go and sin no more."

*This committee consisted of the following persons: Ethan Allen, Seth Warner, Robert Cochran, Peleg Sunderland, James Mead, Gideon Warren and Jesse Sawyer.

*This curious relic of "olden time" is given in full in the American Archives, Vol. I, p. 215; and also in the 15th and 16th Numbers of the Historical Readings, published in the State Banner, at Bennington.

CHAPTER III.

EVENTS OF THE REVOLUTIONARY WAR.

SECTION I.

Events of 1775—Reduction of Ticonderoga—Invasion of Canada—Carleton defeated by Col. Warner—St. Johns and Montreal taken by Gen. Montgomery—Assault upon Quebec.

As all minor contests and sectional difficulties were, for a while, swallowed up by the great and momentous concerns of the Revolution, we shall now proceed to a brief statement of those incidents in the war for independence, with which the people of Vermont were more immediately concerned. The affair at Lexington produced a shock, which was felt from one extremity of the colonies to the other; and it was now perceived that their only reliance for safety was to be placed on a vigorous and effectual resistance to the arms and arbitrary power of Great Britain.

The military posts on lake Champlain were at this time garrisoned by British soldiers, and the British government had been pursuing measures, by which they might, if necessary, avail themselves of the strength and resources of Canada, for the purpose of subjugating their other colonies, in case of revolt. The importance, therefore, of securing these posts to the Americans was at once perceived, and the design of effecting this object engaged at the same time the attention of several adventurers, both in Massachusetts and Connecticut, who were utterly ignorant of each other's views. But the first active measures for accomplishing an undertaking so desirable as the reduction of these posts, appear to have been taken by several enterprising gentlemen of Connecticut.

As the success of the enterprise depended upon its being managed with secrecy and despatch, they obtained of the Connecticut legislature a loan of \$1800, and, having procured a quantity of powder and balls, they hastened forward to Bennington with the view of engaging Ethan Allen in the business. Allen readily undertook to conduct the enterprise and set off to the northward with his usual spirit of promptness and activity for the purpose of enlisting and collecting men for the expedition. The gentlemen

from Connecticut, having purchased a quantity of provisions, proceeded to Castleton, where they were joined by Allen with his recruits.

While they were collecting at Castleton, Col. Arnold arrived there attended only by a servant. This officer had been chosen captain of an independent company at New Haven in Connecticut, and, as soon as he heard of the battle at Lexington, he marched his company to Cambridge, where the Americans were assembling to invest Boston. There he received a Colonel's commission from the Massachusetts committee of safety with orders to raise 400 men for the reduction of Ticonderoga and Crown Point, which he represented to be in a ruinous condition and feebly garrisoned. His commission being examined, Arnold was permitted to join the party; but it was ordered by a council that Allen should also have the commission of Colonel, and should be first in command.

To procure intelligence, Capt. Noah Phelps, one of the gentlemen from Connecticut, went into the fort at Ticonderoga in the habit of one of the settlers, where he inquired for a barber, under the pretence of wanting to be shaved. By affecting an awkward appearance, and asking many simple questions, he passed unsuspected, and had a favorable opportunity of observing the condition of the works. Having obtained the necessary information, he returned to the party, and the same night they began their march for the fort. And these affairs had been conducted with so much expedition, that Allen reached Orwell, opposite to Ticonderoga, with his men, in the evening of the 9th of May, while the garrison were without any knowledge of the proceedings, and without any apprehension of a hostile visit.

The whole force collected on this occasion amounted to 270 men, of whom 230 were Green Mountain Boys. It was with difficulty that boats could be obtained to carry over the troops. A Mr. Douglas was sent to Bridport to procure aid in men, and a scow belonging to Mr. Smith. Douglas stopped by the way to enlist a Mr. Chapman in the enterprise, when James Wilcox and Joseph Tyler,

TICONDEROGA AND CROWN POINT TAKEN.

EVENTS ON LAKE CHAMPLAIN.

two young men, who were a-bed in the chamber, hearing the story, conceived the design of decoying on shore a large oar boat belonging to Maj. Skene, and which then lay off against Willow point. They dressed, seized their guns and a jug of rum, of which they knew the black commander to be extremely fond,—gathered four men as they went, and, arriving all armed, they hailed the boat and offered to help row it to Shoreham, if he would carry them there immediately to join a hunting party, that would be waiting for them. The stratagem succeeded, and poor Jack and his two men suspected nothing till they arrived at Allen's head quarters, where they were made prisoners of war.

Douglas arrived with the scow about the same time, and, some other boats having been collected, Allen embarked with 83 men and landed near the fort. As the morning was advancing, it was deemed inexpedient to wait for the remainder of the men to pass over. Arnold now wished to assume the command, and swore that he would lead the men into the fort. Allen swore he should not, but that he himself would be the first man that should enter. As the dispute grew warm, some of the gentlemen interposed, and it was agreed that they should both enter at the same time, but that Allen should enter on the right, and have the command.

Accordingly, a little after day break in the morning of the 10th of May, 1775, they advanced towards the works followed by their men.* The sentry at the outer post snapped his fusee at Allen, and, retreating through the covered way, was followed by the Americans, who were immediately drawn up on the parade within the fort. With so great expedition and silence was this business accomplished that the garrison, excepting the sentries, were not awakened from their slumbers, till aroused by the huzzas of the *Green Mountain Boys*, already in possession of the fort. The Capt. De Laplace, without waiting to dress himself, hastened to the door of the barrack, when Allen sternly commanded him to surrender, or he would put the whole garrison to the sword. De Laplace inquired by what authority he demanded it. I demand it, says Allen, "*in the name of the Great Jehovah and the Continental Congress.*"

Surrounded by the Americans, the Brit-

ish captain perceived that resistance was vain, and surrendered the garrison prisoners of war, without knowing by what authority Allen was acting, or that hostilities had commenced between Great Britain and her colonies. As soon as Allen had landed with his party, the boats were sent back for the remainder of the men, who had been left under the command of Col. Seth Warner. Warner arrived soon after the place surrendered, and taking the command of a party, set off for the reduction of Crown Point, which was garrisoned only by a sergeant and twelve men. They surrendered upon the first summons, and Warner took possession of the fort. Skenesborough was also taken, the same day, by another party, and Maj. Skene made prisoner.

By these enterprises, the Americans captured a British Major, a Captain, a Lieutenant, and forty-four privates. In the forts, they found more than 200 pieces of cannon, some mortars and howitzers, and large quantities of military stores; and also a ware-house filled with materials for carrying on the business of building boats. All these cost not the Americans a single man; and elated with their success, they now determined to secure the command of lake Champlain, by getting possession of an armed sloop, which then lay at St. Johns. For this purpose they armed and manned a schooner, and procured a number of batteaux. Arnold took command of the schooner, and Allen of the batteaux, and they both set out together upon the expedition. But a fresh wind springing up from the south, the schooner out-sailed the batteaux, and Arnold soon reached St. Johns, where he surprised and captured the sloop. The wind immediately shifting to the north, Arnold set sail with his prize, and met Allen with his batteaux at some distance from St. Johns. Thus, in the course of a few days, and by a few daring individuals, was lake Champlain and its important fortresses secured to the Americans.

The American Congress, having received intelligence that the governor of Canada had been making exertions to engage the Canadians and Indians to fall upon the frontier of the colonies, determined to send a body of American troops into that province, in the hopes that the Canadians would join the other colonies, in opposition to Great Britain. For this purpose, it was proposed to raise 2000 men, who were to be placed under the command of Generals Schuyler and Montgomery. Much pains were taken to raise the troops, and a large number of batteaux and flat-bottomed boats were built

* Allen was guided into the fort by Nathan Beman, a young lad whose father resided near the lake in Shoreham. Nathan had passed much of his time in company with the boys of the garrison and was familiar with every nook in the fort and every passage and by-path by which it could be approached.—*Spark's Am. Biog.* Volume 1, page 274.

MONTGOMERY ADVANCES INTO CANADA.

ETHAN ALLEN TAKEN.

at Ticonderoga and Crown Point to convey the forces to Canada.

Montgomery set out from Crown Point on the 21st of August, but soon received intelligence that the British Gen. Carleton was prepared to obstruct his designs—that he had provided a considerable naval force and was about entering the lake with a body of British troops. To prevent this, Montgomery proceeded down the lake, with the forces which had arrived, to the Isle la Motte, where he was soon joined by Gen. Schuyler; and they both moved forward to the Isle aux Noix, where they took proper measures to prevent the passage of the British vessels into the lake.

From this place, the American generals sent proclamations into the adjacent country, assuring the Canadians that they had no designs against them, and inviting them to unite with the Americans in asserting their rights and securing their liberties. On the 6th of September, they proceeded without opposition towards St. Johns with their whole force, which did not exceed 1000 men. A landing was effected about a mile and a half from the fort, but, while advancing to reconnoitre the works, their left was attacked by a party of Indians, who killed three and wounded eight of the Americans. The Indians were, however, soon repulsed, with the loss of five killed and four severely wounded. Finding the fortress well garrisoned and prepared to make a vigorous defence, the Americans thought it prudent to return to the Isle aux Noix, and there wait the arrival of their artillery and re-enforcements, which were daily expected.

Schuyler returned to Albany to conclude a treaty, which had been some time negotiating, with the Indians, leaving the command to Montgomery. On the 17th of September, Montgomery, having received the expected re-enforcements, proceeded to St. Johns and laid siege to that fortress. The place was garrisoned by the greatest part of two British regiments, and contained nearly all the regular troops in Canada, and it was at the same time well supplied with artillery, ammunition and military stores. The first measure of Montgomery was an attempt to detach the Indians, who had joined Gen. Carleton, from the British cause. Having succeeded in this, parties of the provincials were dispersed over the country and were favorably received by the Canadians.

As Col. Ethan Allen, with 80 men, was returning from one of these excursions, he was met by Maj. Brown, who was out upon the same business with 200

men. Brown informed Allen that Montreal was entirely without defence, and might easily be surprised; and it was finally agreed between them that they should proceed to make an immediate attempt upon it. Allen was to cross the river and land a little north of the city, while Brown was to land a little to the south, and both were to commence the attack at the same time. Allen crossed over with his little band of 80 men, in the night, as had been agreed, but he waited in vain for the appearance of Brown to co-operate with him. And when day light appeared, and rendered the surprise of the place impracticable, instead of saving himself by a retreat, Allen rashly determined to maintain his ground.

Gen. Carleton soon received intelligence of Allen's situation, and early in the morning marched out against him, with about 40 regulars, together with several hundred English settlers, Canadians and Indians. Allen's force was made up of Green Mountain Boys and Canadians, and at the head of these he fought with desperate courage until most of the Canadians had deserted him, and *fifteen* of his men were killed and *several* wounded. But courage was unavailing against such a superiority of numbers. Allen was taken prisoner, on the 25th of September, with 38 of his men, and by order of Gen. Carleton they were all immediately loaded with irons. In that condition, they were put on board a man of war, and carried to England. During the voyage they were treated with such rigor as to render their suffering almost intolerable.

Montgomery was in the mean time pushing the siege of St. Johns as fast as his embarrassed circumstances would permit. He derived much assistance from the Canadians, who had joined him, and being informed by them that the little fortress of Chambly, situated further down the Sorel, contained a large quantity of ammunition and military stores, of which the besiegers were much in need, he ordered Majors Brown and Livingston to proceed against it. The garrison, consisting of about one hundred men, after a short resistance surrendered themselves on the 18th of October, prisoners of war. By this capitulation the Americans obtained 120 barrels of powder, a large quantity of military stores and provisions, and the standard of the 7th Regiment. This standard was immediately transmitted to Congress, and was the first trophy of the kind which that body had ever received.

The besiegers, having obtained a supply of ammunition and stores by the cap-

CARLETON DEFEATED.

ST. JOHNS TAKEN.

UNSUCCESSFUL ASSAULT ON QUEBEC.

ture of Chambly, made their advances upon the fort at St. Johns with increased vigor. The garrison consisted of between six and seven hundred men, who, in the hopes of being soon relieved by General Carleton, made a resolute defence. Carleton exerted himself for this purpose, but such was the disaffection of the Canadians to the British cause, that he could not muster more than one thousand men, including the regulars, the militia of Montreal, the Canadians, and the Indians. With these, he purposed to cross the St. Lawrence and join Col. Maclean, who had collected a few hundred Scotch emigrants and taken post at the mouth of the Richelieu, hoping, with their united forces, to be able to raise the siege of St. Johns and relieve the garrison.

In pursuance of this design, Carleton embarked his troops at Montreal with the view of crossing the St. Lawrence and landing at Longueuil. Their embarkation was observed by Col. Seth Warner, from the opposite shore, who, with about 300 Green Mountain Boys, watched their motions, and prepared for their approach. Just before they reached the south shore, Warner opened upon them a well directed and incessant fire of musketry and grape shot from a four pounder, by which unexpected assault, the enemy were thrown into the greatest confusion, and soon retreated with precipitation and disorder. When the news of Carleton's defeat reached Maclean he abandoned his position at the mouth of the Richelieu and hastened to Quebec.

By these events, the garrison at St. Johns was left without the hope of relief, and Major Preston, the commander, was, consequently, obliged to surrender. The garrison laid down their arms on the 3d of November, marched out of the works and became prisoners of war, to the number of 500 regulars and more than 100 Canadian volunteers. Gen. Montgomery treated them with the greatest politeness, and had them conveyed by the way of Ticonderoga into the interior of New England. In the fort was found a large quantity of cannon and military stores.

Col. Warner, having repulsed General Carleton, and caused Col. Maclean to retire to Quebec, proceeded to erect a battery at the mouth of the Richelieu, which should command the passage of the St. Lawrence, and thus block up Gen. Carleton at Montreal. In this situation of things, Gen. Montgomery arrived from St. Johns, and took possession of Montreal, without opposition, on the 13th of November, Gen. Carleton having abandoned it to its fate, and escaped down the

river in the night in a small canoe with muffled oars. A large number of armed vessels loaded with provisions and other necessaries, and Gen. Prescott with 120 British officers and privates, also attempted to escape down the river, but were stopped at the mouth of the Richelieu, and all captured by the Americans without the loss of a man.

The attention of Montgomery was immediately turned towards Quebec, where Carleton was now making every preparation for defence. Col. Arnold, after surmounting incredible difficulties and hardships, had passed through the wilderness from Maine to Canada, and appeared before Quebec with 700 men on the 9th of November, and now Montgomery, having removed every obstacle, hastened forward to join him, which he did on the 1st day of December. Their united force amounted to only about 1000 men, while that of the garrison numbered 1500; but as the latter was made up principally of Canadians and militia, Montgomery still had hopes of success. Finding that the artillery and shells produced but little effect upon the enemies' works, and that the weather was becoming too severe to carry on a regular siege, it was finally determined to make a general assault upon the town.

Accordingly, on the morning of the 31st of December, the troops were led on to the attack. But it proved unsuccessful. The gallant Montgomery was slain, and nearly one-half the American troops were killed, or taken prisoners. Arnold, though severely wounded, took the command of the shattered forces and continued the blockade, determined to await the re-enforcements which he believed would soon be sent on to his relief. Thus terminated in this quarter, the campaign of 1775, and thus commenced those reverses, which were to attend the American arms in Canada during the succeeding year.

SECTION II.

Events of 1776. Small Pox fatal in the army—American army retreats—Unsuccessful expedition against Three Rivers—Affairs at the Cedars—Chamblée and St. Johns abandoned by the Americans—Naval engagement on lake Champlain—Crown Point abandoned.

The re-enforcements, which were sent to the relief of Arnold, arrived but slowly, and when Gen. Thomas reached the camp before Quebec, on the 1st day of May, 1776, the whole American force at that

RETREAT OF THE AMERICAN ARMY.

AFFAIRS AT THE CEDARS.

place did not exceed 1900 men. In this state of things, and before any thing of consequence had been attempted against the city, the small pox commenced its ravages among the provincial troops, and it is hardly possible to conceive the distress, the terror and confusion it occasioned in the American camp. Ignorant of the true nature of the disease, and of the means by which its progress might be impeded; and anticipating dangers, which their fears had greatly magnified, the troops could, with difficulty, be prevented from a total dispersion. The soldiers, having heard that inoculation was the surest preventive of a fatal termination, proceeded, in defiance of orders, to inoculate themselves; and the recruits as they arrived, did the same, and thus was the disease still wider diffused, so that out of 3000 troops, which had now arrived, not more than 900 were fit for duty.

After a few trifling efforts against the town, Gen. Thomas was convinced that nothing of consequence could be effected with an army in the condition to which his was reduced, and being nearly destitute of provisions, and daily expecting the British garrison would be re-enforced by the arrival of an army from England, it was concluded, in a council of war, to abandon the siege and make the best retreat their circumstances would permit. The next day a British man of war and two frigates arrived at Quebec, with succours for the town, having, with incredible exertions and dexterity, cut their way through the ice while the navigation was extremely difficult and dangerous.

One thousand marines having been landed from the ships, Gen. Carleton put himself at the head of these, and 800 of his own troops and about noon marched out to give battle to the Americans. But he was too late. Gen. Thomas, foreseeing this event, had commenced his retreat; but it was done with so great precipitation that the Americans had left behind, their artillery, stores and baggage, and a number of their sick. Carleton was content with getting possession of these, and with being relieved of his besiegers, and did not pursue the Americans. The prisoners who fell into his hands were treated with the most humane and kind attention.

The Americans continued their retreat to the river Richelieu, having marched the first 45 miles without halting. Here they found several regiments waiting for them under Gen. Thompson, who a few days after succeeded to the command, by the unfortunate death of Gen. Thomas, who died of the small pox. Gen. Sullivan

and several battalions arrived about this time, and Sullivan having taken the command, now planned an enterprize against the enemy which savored much more of boldness than prudence. The British army, which was now augmented by reinforcements from Europe to more than 13,000 men, had their chief rendezvous at Three Rivers, a post on the north side of the St. Lawrence, about half-way between Quebec and Montreal. Gen. Sullivan conceived the design of surprising this post, and for that purpose detached Gen. Thompson on the 7th of June, with 1800 men, who proceeded down the river in the night, expecting to reach Three Rivers before day-light. But unavoidable delays rendered it impossible. They were discovered by the British, before they reached the village, who marched out, attacked and dispersed them, making their general, and about 200 men prisoners.

Montreal had, early in the spring, been placed under the command of Arnold, who was now raised to the rank of brigadier-general, and a party of 380 Americans under Col. Beadle had been posted at the Cedars, a small fort 43 miles above that city. Being frightened at the appearance of a force descending the river to attack him, Beadle abandoned the command to Major Butterfield, and hastened to Montreal for a reenforcement; and Butterfield, with an equal want of spirit, surrendered the fort and garrison on the 15th of May.

As soon as Beadle arrived at Montreal, Arnold detached Major Sherburne with 140 men, to relieve the fort at the Cedars. On their way they were attacked, surrounded, and after a gallant defence of nearly two hours, made prisoners, by a body of 500 Indians. Many of the Americans were killed or wounded in the engagement. Twenty others were afterwards put to death in cool blood, with all the aggravations of savage barbarity. The remainder were stripped, driven to the fort and delivered up to Capt. Foster, to whom Butterfield had surrendered.

When the intelligence of these events reached Arnold, he put himself at the head of eight or nine hundred men and flew to the rescue of the unfortunate captives. Upon his approach to the fort he received a communication from Capt. Foster, informing him that if he would not consent to a *cartel*, which he had already forced Major Sherburne and other officers to sign, the prisoners should all be *immediately put to death*. Arnold hesitated, but humanity and a regard for the captured officers, at length compelled him to accede to the proposal, and thus was his vengeance disarmed.

RETREAT FROM CANADA.

NAVAL FORCES OF LAKE CHAMPLAIN.

The American army in Canada was so much inferior to the British, that nothing remained for them but to make the best retreat in their power. On the 14th of June, they abandoned their post at Sorel, which a few hours afterwards was in possession of the British army. Gen. Burgoyne was immediately detached with one column in pursuit of the Americans, but with orders not to hazard an engagement until he should receive a re-enforcement. On the 15th of June, Arnold withdrew with his troops from Montreal and marched to Chamblee, where the American forces were assembled, and were engaged with much spirit and resolution in dragging their artillery and stores up the rapids.

This service was attended with much difficulty and danger; but they succeeded in drawing up more than one hundred batteaux, heavily laden, and having set fire to the mills and the shipping which they could not bring off, they left the village of Chamblee at the very time the British were entering it on the other side. On the 18th of June, Gen. Burgoyne reached St. Johns in the evening, but the Americans had taken away every thing of value and set fire to the fort and barracks. Major Bigelow, with about 40 men remained at St. Johns till the works were all destroyed, and left that place the same evening that Burgoyne arrived there, and joined the American army which had halted at the Isle-aux-Noix.

The British were unable to get any of their vessels over the rapids at Chamblee, and were, consequently, unable to continue the pursuit of the American army, which now proceeded in safety to Crown Point. This retreat was conducted by Sullivan, with such consummate skill and prudence, as to retrieve his character from the imputations brought upon it by the rash and unsuccessful expedition against Three Rivers, and to merit the thanks of Congress, and of the whole army.

On the 12th of July, Gen. Sullivan was succeeded by Gen. Gates, in the command of the northern army. The first business of Gates was to restore to health and soundness the sick and wounded, and to increase his force by new recruits. He assembled a council of war, by which it was resolved to abandon Crown Point, and concentrate all their strength and make a vigorous stand at Ticonderoga, and on Mount Independence, which is situated on the opposite side of the lake. A general hospital was established at fort George, to which those who were sick with the small pox, were sent forward, and to avoid this contagious and loathsome disease, the new recruits were as-

sembled at Skenesborough. On the sixth of August, six hundred men arrived from New Hampshire, and re-enforcements were daily arriving from other quarters. The army was also all the time improving in health and discipline, and was active and vigorous in preparations for defence.

As it was of the greatest importance to the Americans to preserve the command of the lake, by constructing upon it a naval force superior to that of the British, they engaged with their usual activity in accomplishing this object. But in the prosecution of it they had innumerable difficulties to encounter. Their timber was to be cut in the woods and dragged by hand to the place where it was wanted for use; the materials for naval equipments were to be brought from a great distance over roads almost impassable; and the ship-carpenters were so well employed in the sea ports that it was with extreme difficulty that any could be procured. Yet, notwithstanding these obstacles, by perseverance and industry, they had, on the 18th of August, completed and equipped three schooners and five gondolas, carrying in the whole 55 cannon, consisting of twelve, nine, six and four pounders, and seventy swivels. This armament was manned by three hundred and ninety-five men, and was completely fitted for action.

In the mean time the British were employed in preparing a fleet at St. Johns. Six armed vessels had been built in England and sent over for the express purpose of being employed on lake Champlain; but it was found impossible to get them over the falls at Chamblee without taking them in pieces, transporting them in that form, and then put them together again above the rapids. They succeeded in dragging up a large number of boats entire, and having re-built their vessels, they were ready by the first of October, to enter the lake with their fleet. This fleet consisted of the Inflexible, carrying eighteen twelve pounders, the Maria, of fourteen six pounders, the Carleton, of twelve six pounders, the Thunderer, a flat bottomed radeau, or raft, with six twenty pounders, six twelves and two howitzers, some gondolas, carrying seven nine pounders, twenty gun boats, carrying each one brass field piece from nine to twenty four pounders, and some with howitzers, and four long boats, with each a carriage gun, serving as tenders. These, amounting to thirty-one in number, were all designed and prepared for attack and battle; and were to be followed by a sufficient number of vessels and boats for the transportation of the royal army, with

NAVAL ENGAGEMENT ON THE LAKE.

AMERICANS DEFEATED.

its stores, artillery, baggage and provisions.

This fleet was navigated by seven hundred experienced seamen, commanded by Captain Pringle, and the guns were served by a detachment of men and officers from the corps of artillery, and far exceeded any thing the Americans were able to provide. On the 11th of October, the British fleet and army proceeded up the lake. The American armament, which amounted to 15 vessels of different sizes, was put under the command of General Arnold, who had taken a very advantageous position between Valcour island and the western main. There they formed a strong line of defence, and hoped to be able to check the progress of the enemy.

The British were sensible of their superior strength, and moved forward boldly to attack the Americans. A severe engagement ensued, which was maintained for several hours with much spirit and resolution. The wind being unfavorable, the British were unable to bring the *Inflexible* and some of their other vessels into action, which was principally sustained by the *Carleton* and the gun boats; and as the wind continued adverse, the British, notwithstanding the result had thus far been in their favor, judged it prudent to withdraw from the engagement; but as night approached, they again advanced and anchored in a line as near the Americans as possible, to prevent their escape.

This engagement was sustained on both sides with a courage and firmness which are seldom witnessed. Among the Americans, Gen. Waterbury, of the *Washington* galley, was in the severest part of the action. Excepting one lieutenant and a captain of marines, his officers were all either killed or wounded. He himself fought on the quarter deck during the whole action, and at the close brought off his vessel though shattered and almost torn in pieces. The result of this action was favorable to the British, but less so than they had anticipated, knowing their own force to be double that of the Americans. They had one of their gondolas sunk, and one blown up with 60 men. The Americans had one of their schooners burnt, a gondola sunk, and several of their vessels much injured.

Arnold was now convinced that he could not withstand the superior force of the enemy, and under cover of the night, which was dark and foggy, resolved to attempt a retreat to Ticonderoga. In this measure he so far succeeded as to pass directly through the enemy's line unob-

served, and to be entirely out of sight of the British the next morning. As soon as it was discovered that the Americans had fled, the British, anxious to obtain a decisive victory, commenced a pursuit, and during the day an American gondola was overtaken and captured. On the 13th of October, the wind being favorable to the British, they renewed the chase, and about noon overtook the American fleet a few leagues from Crown Point. A warm engagement ensued, which was supported with great resolution and gallantry on both sides for nearly four hours. The *Washington* galley, commanded by Gen. Waterbury, had been so shattered in the action of the 11th, as to be useless in this engagement, and was surrendered after receiving a few broadsides.

Arnold was on board the *Congress* galley, which vessel was attacked by the *Inflexible* and two shooners, all within musket shot. After sustaining this unequal combat for nearly four hours, Arnold became satisfied that no exertion of courage or skill, could enable him much longer to withstand the superior force of the enemy. He was, however, determined that neither his vessels nor his men should become the trophies of their victory. Having by his obstinate resistance given several of his vessels an opportunity to escape to Ticonderoga, he now run the *Congress* galley and five other vessels on shore, in such manner as to land his men in safety and blow up the vessels in defiance of every effort which the British could make to prevent it. This action took place at no great distance from the mouth of Otter Creek, and the remains of Arnold's vessels were to be seen there upon the beach for many years.

The British, under Gen. Carlton, having now recovered the command of lake Champlain, it was supposed they would next attempt the reduction of Ticonderoga; and, had *Carleton* moved forward immediately, it was supposed that he might have possessed himself of that important fortress without much difficulty, as it was illy prepared for defence. But the wind blowing from the south, *Carleton* landed his army at Crown Point, the Americans having a few days before dismantled the fort and destroyed what they could not carry away, and joined the main army at Ticonderoga. The Americans applied themselves with vigor in strengthening their entrenchments at Ticonderoga, and by the daily arrival of reinforcements, and the recovery of the sick and wounded, Gates soon found himself at the head of 12,000 effective men. In this situation he was not unwilling

ADVANCE OF GEN. BURGoyNE.

EVENTS AT TICONDEROGA.

that Carleton should make an attempt to get possession of the place. But that judicious commander did not see fit to hazard an assault; and, after spending about a month in reconnoitering the American works, he re-embarked his army at Crown Point, and returned to Canada, and thus terminated the military enterprises on lake Champlain for the year 1776.

SECTION III.

Events of 1777. Advance of Gen. Burgoyne—Ticonderoga abandoned by the Americans—Battle at Hubbardton—Retreat from fort Edward—Battle at Bennington—At Stillwater—Surrender of Burgoyne.

Before the opening of the campaign of 1777, Sir Guy Carleton was superseded in the command of the British forces, designed to enter the United States from Canada, by Lieut. Gen. Burgoyne, who was a great favorite of the ministry, and an officer of some reputation. He was, however, unacquainted with the American character and service, and was by no means so well fitted to plan and execute the operations in this quarter as the General whom he supplanted. The regular force allotted to Burgoyne amounted to 7,173 men, exclusive of the corps of artillery. Of these, 3,217 were Germans and the remainder British troops. This force was expected to be increased on its arrival in America by a large number of Canadians and Indians, for whom arms and accoutrements were forwarded from England.* Burgoyne was also provided with an excellent train of brass artillery, and was assisted in the command by Generals Philips, Fraser, Powel, Hamilton, Riedesel and Specht, all of them able and experienced officers.

Gen. Burgoyne arrived at Quebec on the 6th of May, and took the command of the army designed for the expedition. On the 12th, he proceeded to Montreal, using every possible exertion to collect and forward the troops and stores to Lake Champlain. Between the 17th and 20th of June, his whole army was assembled at Cumberland Head, at which place it embarked and proceeded up the Lake without opposition. June 21st, Burgoyne landed his army on the west side of the Lake at the mouth of the river Boquet, in the present township of Willsborough,

New York. Here he was joined by four or five hundred Indians, who were to assist in the expedition. After making for the Indians a war feast according to their custom, Burgoyne addressed a speech to the chiefs and warriors, calculated to excite their savage ardor in the British cause, and to give such directions to their fierceness and cruelty as should best subserve his designs against the Americans.*

General Schuyler, being supposed most fully to possess the confidence of the inhabitants of this part of the country, had been appointed to the command of the northern department of the American army, but he arrived at Ticonderoga only four days previous to Burgoyne's council with the Indians at the river Boquet. On inspecting the works, Schuyler found them in many parts unfinished, and the whole in a very bad condition. He likewise found that very few of the recruits which had been ordered to that post, had arrived, and that the militia of the neighborhood could not be safely called in, lest the provisions of the garrison should be exhausted before the arrival of supplies. Leaving the command of this post to Gen. St. Clair, Schuyler returned to fort Edward, for the purpose of hastening forward re-enforcements and provisions.

On the 30th of June, the enemy advanced towards Ticonderoga upon both sides of the lake, and encamped for the night about four miles from the American lines. The next day their whole army and fleet proceeded forward and took their position just without the reach of the American cannon; the fleet anchoring in a line between the divisions on the east and west shore of the lake. On the 2d of July a party of 500 of the enemy under Capt. Fraser attacked a picket of 60 men, within 200 yards of the American batteries, and, forcing them to retire, advanced within 60 yards of the works, scattering themselves along the whole front of the American lines; the right wing of the British army moved up from their position on the lake at the same time, and took possession of Mount Hope.

St. Clair, supposing that an assault was intended, ordered his men to conceal themselves behind the parapets and reserve their fire. Fraser's party, probably deceived as to the real position of the American works, which were in a measure concealed by bushes, continued to advance till an American soldier discharged his musket, which seemed to be understood as a signal, and the whole line arose and fired a volley;—the artillery

* See Lord Germain's Letter to Gen. Carleton, dated March 26, 1777, in Burgoyne's State of the Expedition, p. 7. Appendix.

* For this Speech and the Reply, see Williams' History, Vol. II. p. 437.

BURGOYNE'S PROCLAMATION.

AMERICANS ABANDON TICONDEROGA.

following the example without orders. This fire was made at random, and the effect of it was to produce so much smoke that the enemy could not be seen till they were beyond the reach of the American guns; and consequently every individual except one escaped.

On the 4th of July, Gen. Burgoyne issued a proclamation designed to spread terror among the Americans, and persuade them to come and humble themselves before him, and through him, supplicate the mercy of their offended king. The number and ferocity of the Indians, their eagerness to be let loose upon the defenceless settlements, the greatness of the British power, and the utter inability of the rebellious colonies to resist it, were all set forth in bold relief. His gracious protection was promised to all those who should join his standard, or remain quietly at their homes; but utter destruction was denounced upon all such as should dare to oppose him. This proclamation was couched in terms the most pompous and bombastic; but upon the Americans it produced no other emotions than those of derision and contempt. Its threatenings and its promises were alike disregarded—none were terrified by the former, and none were won by the latter.*

Although every possible exertion had been made by St. Clair and his men, the state of the American works and of the garrison was not such as to insure a long and vigorous defence. The old French fort had been strengthened by some additional works, several block houses had been erected, and some new batteries had been constructed on the side towards lake George. The Americans had also fortified a high circular hill on the east side of the lake opposite to Ticonderoga, to which they had given the name of Mount Independence. These two posts were connected by a floating bridge twelve feet wide and one thousand feet long, which was supported by twenty two sunken piers of large timber. This bridge was to have been defended by a boom strongly fastened together by bolts and chains; but this boom was not completed when Burgoyne advanced against the works.

Notwithstanding the apparent strength of the posts occupied by the Americans, their works were all effectually overlooked and commanded by a neighboring eminence called Sugar Hill, or Mount Defiance. This circumstance was well known

to the American officers, and they had a consultation for the express purpose of considering the propriety of fortifying this mountain; but it was declined, because they believed the British would not think it practicable to plant cannon upon it, and because their works were already so extensive, that they could not be properly manned, the whole garrison consisting of only 2,546 continental troops, and 900 militia; the latter very badly armed and equipped.

St. Clair was sensible that he could not sustain a regular siege; still he hoped that the confidence of Burgoyne would induce him to attempt to carry the American works by assault, against which he was resolved to defend himself to the last extremity. But to the surprise and consternation of the Americans, on the 5th of July, the enemy appeared upon Mount Defiance, and immediately commenced the construction of a battery. This battery, when completed, would effectually command all the American works on both sides of the lake, and the line of communication between them; and, as there was no prospect of being able to dislodge the enemy from this post, a council of war was called, by which it was unanimously agreed that a retreat should be attempted that very night, as the only means of saving the army.

Accordingly, about two o'clock in the morning of the 6th of July, Gen. St. Clair, with the garrison, left Ticonderoga, and at about three o'clock the troops on Mount Independence were put in motion. The baggage, provisions and stores were, as far as practicable, embarked on board 200 batteaux, and despatched, under convoy of five armed gallies, to Skenesborough, while the main body of the army proceeded by land on the route through Hubbardton and Castleton. These affairs were conducted with secrecy and silence, and unobserved by the enemy, till a French officer, imprudently and contrary to orders, set fire to his house. The flames immediately illuminated the whole of Mount Independence, and revealed to the enemy at once the movements and designs of the Americans. It at the same time impressed the Americans with such an idea of discovery and danger, as to throw them into the utmost disorder and confusion.

About four o'clock, the rear guard of the Americans left Mount Independence, and were brought off by Col. Francis in good order; and the regiments which had preceded him, were soon recovered from their confusion. When the troops arrived at Hubbardton, they were halted

* This pompous proclamation, together with an amusing burlesque upon the same, written by a young officer and designed for the soldiers of the American army, may be found in Williams' History, volume 2, page 430.

HUBBARDTON BATTLE.

PLAN OF THE BATTLE GROUND.

for nearly two hours. Here the rear guard was put under the command of Col. Seth Warner, with orders to follow the army, as soon as those, who had been left behind, came up, and to halt about a mile and a half in the rear of the main body. St. Clair then proceeded to Castleton, about six miles further, leaving Warner, with the rear guard and stragglers, at Hubbardton.

The retreat of the Americans from Ticonderoga was no sooner perceived by the British than an eager pursuit was begun by Gen. Fraser with the light troops, who was soon followed by Gen. Riedesel with the greater part of the Brunswick regiments. Fraser continued the pursuit during the day, and having learned that the rear of the American army was not far off, ordered his men to lie that night upon their arms. Early on the morning of the 7th, he renewed the pursuit, and about 7 o'clock, commenced an attack upon the Americans under Warner. Warner's force consisted of his own regiment, and the regiments of Cols. Francis and Hale. Hale, fearful of the result, retired with his regiment, leaving Warner and Francis, with only seven or eight hundred men, to dispute the progress of the enemy.*

The conflict was fierce and bloody. Francis fell at the head of his regiment, fighting with great resolution and bravery. Warner, well supported by his officers and men, charged the enemy with such impetuosity that they were thrown into disorder, and at first gave way. They, however, soon recovered, formed anew, and advanced upon the Americans, who, in their turn, fell back. At this critical moment, a re-enforcement under

* This statement is made upon the authority of Dr. Williams' History of Vt. volume 2, page 106, and of Ethan Allen's Narrative, page 139, Walpole edition, and may seem to imply a want of courage in that young officer. Reports were circulated unfavorable to the reputation of Col. Hale, immediately after his surrender, but whether they were well founded, or originated, as many have supposed, in the envy of some of his inferior officers, who wished him cashiered to make room for their own promotion, it is difficult now to decide. When Col. Hale heard these reports, he addressed a letter to General Washington, requesting that he might be exchanged and have an opportunity to vindicate his character before a court martial, but before this could be effected he died, while a prisoner upon Long Island, in September, 1780, aged 37 years.

As Col. Hale and many of his men are known to have been in a feeble state of health and consequently unfit for military service, and as the historians generally of that period attach no blame to his conduct, and especially, as his character is said to have been irreproachable in other respects, we should certainly be doing wrong in allowing an imputation so injurious to his reputation and so mortifying to his highly respectable descendants in this state, to rest upon his name without more conclusive proof of its having been deserved.

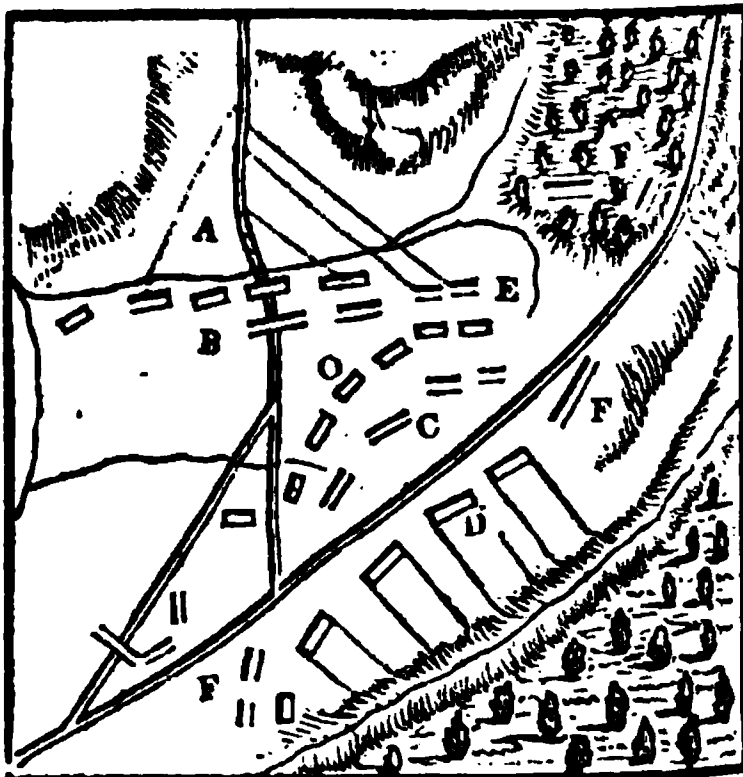
Gen. Riedesel arrived, which was immediately led into action, and the fortune of the day was soon decided. The Americans, overpowered by numbers, and exhausted by fatigue, fled from the field in every direction.

The loss of the Americans in this encounter was very considerable. Hale was overtaken by a party of the British, and surrendered himself and a number of his men, prisoners of war. The whole American loss in killed, wounded and prisoners, was 324, of whom about 30 were killed. The loss of the enemy in killed and wounded, was 183.*

Gen. St. Clair, with the main body of the American army, was at Castleton, only six miles distant, during this engagement, but sent no assistance to Warner. After the battle, Warner, with his usual perseverance and intrepidity, collected his scattered troops and conducted them safely to Fort Edward, to which

* This number is given on the authority of Gordon, Williams and others. Ethan Allen in his Narrative, page 140, Walpole edition, says that, by the confession of their own officers to him while a prisoner, the British lost 300 killed, and complained that the Green Mountain Boys took right. The Earl Balcarras acknowledges the loss of 150 killed and wounded in Fraser's division. See State of the Expedition, page 27.

The following plan of the Hubbardton Battle Ground is copied on a much smaller scale from the one drawn by P. Gerlach, Deputy Quarter Master General in the British army and published in Burgoyne's State of the Expedition.



The parallelograms denote the Americans—the parallel lines, unconnected at the end, the enemy—A, the point on the road from Ticonderoga to Castleton where Fraser's division formed and attacked the Americans at B—O, the position of the Americans, when Riedesel with the re-enforcement took the position E, who thereupon fell back to D, and the enemy advanced to C, where the battle was continued till the Americans fled across the brook into the woods—F, the position of the enemy after the action.

RETREAT FROM TICONDEROGA.

ADVANCE OF THE BRITISH ARMY.

place St. Clair had retired with the army. While Genl. Fraser and Riedesel were pursuing the Americans by land, General Burgoyne himself conducted the pursuit by water. The boom and bridge between Ticonderoga and Mount Independence not being completed, were soon cut through, and by nine o'clock in the morning of the 6th, the British frigates and gun boats had passed the works. Several regiments were immediately embarked on board the boats, and the chase commenced. By three in the afternoon the foremost boats overtook and attacked the American galleys near Skenesborough, (now Whitehall,) and, upon the approach of the frigates, the Americans abandoned their galleys, blew up three of them, and escaped to the shore. The other two fell into the hands of the British.

As the American force was not sufficient to make an effectual stand at Skenesborough, they set fire to the works, mills and batteaux and retreated up Wood Creek to fort Ann. Being pursued by the ninth British regiment under Colonel Hill, the Americans turned upon him and gave him battle with such spirit as to cause him to retire to the top of a hill, where he would have been soon overpowered, had not a re-enforcement come at that critical moment to his assistance. The Americans, upon this, relinquished the attack, and having set fire to fort Ann, retreated to fort Edward and joined the main army under Schuyler.

The retreat from Ticonderoga was very disastrous to the Americans. Their cannon, amounting to 128 pieces,—their shipping and batteaux, and their provisions, stores and magazines, fell into the hands of the enemy. By this event, Burgoyne obtained no less than 1,748 barrels of flour, and more than 70 tons of salt provisions; and, in addition to these, a large drove of cattle, which had arrived in the American camp a few days previous to their retreat, fell into his hands. After St. Clair had joined Schuyler at fort Edward, and all the scattered troops had come in, the whole American force at that place did not exceed 4,400 men. Sensible that with this force, it would be impossible to make an effectual stand, it became the chief object of the American generals to impede as much as possible the progress of the enemy by cutting down trees, blocking up the roads, and destroying the bridges.

The works at fort Edward being in no condition to afford protection to the American army, Gen. Schuyler abandoned them on the 22d of July, and retired with his whole force to Moses

Creek, a position on the Hudson, about four miles below fort Edward. At this place the hills approach very near the river on both sides, and this was selected as a favorable position to make a stand and dispute the progress of the enemy. But the army was found to be so much reduced by defeat and desertion, and the dissatisfaction to the American cause was found to be so general in this section of the country, that it was judged best to retire to Saratoga, and subsequently, to Stillwater, at which place the army arrived on the 1st day of August.

The British were in the mean time bringing forward their artillery and stores, and opening the way from Skenesborough to fort Edward. But so effectually had the Americans blocked up and obstructed the road, that the British army was frequently 24 hours in advancing one mile. It was not till the 30th of July—that Burgoyne arrived and fixed his head quarters at fort Edward. Nothing could exceed the joy of the British army on its arrival at the Hudson. They flattered themselves that their difficulties and toils were now ended; and that there was nothing before them but a safe and easy march to Albany, and thence to a junction with the British army at New York.

The British had supposed that a large proportion of the inhabitants on the New Hampshire grants and in the northern parts of New York, were opposed to the revolution, and that it was necessary only to march an army into their country, and furnish them with arms to bring them all around the royal standard. Arms had therefore been forwarded by Burgoyne, a proclamation was issued, addressed to the inhabitants of the country, and Burgoyne was now waiting for their submission, and for the arrival of his tents and baggage. But notwithstanding the darkness and gloom which enveloped the American affairs, very few were found, who were disposed to abandon the cause of their *country* for that of their *king*.

At this period, settlements had been commenced in most of the towns in the present counties of Bennington and Rutland, and in several towns to the northward of Rutland county. But upon the advance of Burgoyne along the lake, the settlers retired towards the south, and at the time Burgoyne was upon the Hudson, very few settlers remained upon their farms to the northward of the present county of Bennington. But, that the settlers were generally true to the American cause, we are assured by the testimony of Burgoyne himself. In his private letter to Lord Germain, dated Saratoga, August

GEN. JOHN STARK.

EXPEDITION TO BENNINGTON.

20th, 1777, he says, "The Hampshire grants in particular, a country unpeopled and almost unknown in the last war, now abounds in the most active and most rebellious race on the continent, and hangs like a gathering storm on my left."^{*}

On the 15th of July, the committee of safety of Vermont assembled at Manchester, where they agreed to raise all the men they could, to oppose the enemy, who were then advancing towards fort Edward. They at the same time wrote in the most urgent terms to New Hampshire and Massachusetts, to send on a body of troops to their assistance.[†] The legislature of New Hampshire immediately formed their militia into two brigades, and placed one under the command of Gen. William Whipple, and the other under Gen. John Stark. One fourth of Stark's brigade, and a portion of Whipple's, was then ordered to march immediately, under the command of Gen. Stark, to stop the progress of the enemy upon the north western frontier.

Stark had been an officer of some reputation in the French war, and had also distinguished himself at the battle of Bunker Hill; but considering himself neglected by Congress in not being promoted, he had left the continental service, and would not accept the present command, unless left at liberty to serve, or not, under a continental officer, as he should think proper. As there was no time for delay, the assembly of New Hampshire invested him with a separate command, with orders to repair without delay to the New Hampshire grants, and act either in conjunction with the troops of the grants, or of the other states, or separately, as he should judge best for the protection of the people and the annoyance of the enemy.

Agreeably to his orders, Stark hastened forward with about 800 men, and joined the Vermont troops, who were collected at Manchester under the command of Col. Seth Warner, to the number of about 600, making the united force under Stark, about 1400 men. Gen. Schuyler, wishing to collect all the American troops in front of the British army to prevent its approach to Albany, wrote repeatedly to Stark to join him with the men under his command. But Stark believed that the most effectual way of checking the ad-

vance of Burgoyne, was to hang upon his rear and embrace every favorable opportunity to cut off his supplies and annoy him from that quarter, and therefore neglected to obey the orders of Schuyler. Schuyler complained to Congress of this want of subordination, and Congress proceeded, August 19th, to adopt a resolution censuring the course pursued by the New Hampshire assembly in giving to Stark a separate command, and requesting them "to instruct Gen. Stark to conform himself to the same rules, to which other general officers of the militia are subject, whenever called out at the expense of the United States."

In the mean time Stark wrote to Schuyler that he was willing to unite in any measures which would promote the public good—that he wished to avoid whatever was inconsistent with his own honor—and that private resentment should not prevent his marching to his camp, if it was deemed necessary. He was at the same time watching for an opportunity to manifest his courage and patriotism by an attack upon some part of the British army. Nor was he obliged to wait long for the opportunity to present itself. Nearly at the same time when Congress was censuring his conduct by a public resolution, Stark and his brave followers were acquiring unfading laurels, and rendering that service to the American cause, which soon after procured for him, from the same Congress, a vote of thanks, and promotion to the rank of brigadier general in the army of the United States.

From the 28th of July, to near the middle of August, the British army was constantly employed in bringing forward their batteaux and stores from lake George to the first navigable part of Hudson river. But with all his efforts and diligence, Burgoyne was unable to bring forward, with his other stores, a sufficient quantity of provisions for daily consumption, and the establishment of the necessary magazines. It was this circumstance which induced him to attempt to replenish his own stores at the expense of the Americans. Having learned that large quantities of provisions were collected together at Bennington, and designed for the American army, and that they were guarded only by militia; and, moreover, being made to believe that a majority of the people in that quarter were friendly to the royal cause, and were ready to join it, whenever an opportunity should permit, Burgoyne determined to surprise the place and secure the stores to his own army.

For this purpose he detached a select

^{*}This letter was written just after the Bennington Battle, and shows plainly that Burgoyne had already begun to despair of accomplishing the objects of the expedition. It may be found in the State of the Expedition, page 24 of the Appendix.

[†]The correspondence with N. H. may be found in *Slade's Vt. State Papers*, page 79.

body of about 500 regular German troops, some Canadians and more than 100 Indians, with two light pieces of artillery, and placed the whole under the command of Col. Baum. To facilitate their operations, and to take advantage of their success, a detachment of the British army was posted upon the east bank of the Hudson, opposite to Saratoga, and another detachment under Col. Breymen was stationed at Battenkill. This disposition being made, Baum set out with his detachment for Bennington, on the morning of the 12th of August, and arrived that day at Cambridge, which is about 12 miles north west from Bennington.

General Stark had moved forward to Bennington on the 9th of August, with his whole force, excepting Warner's regiment, which remained at Manchester under the command of Major Samuel Safford. On the 13th of August Stark received intelligence that a party of Indians had been observed at Cambridge, and dispatched Lieut. Col. Gregg with 200 men to stop their progress; but he was soon advised by express that there was a large body of the enemies troops, with a train of artillery, in the rear of the Indians, and that they were advancing towards Bennington. He immediately rallied his forces, made an animated call upon the neighboring militia, and sent orders to Major Safford to join him with Warner's regiment.

On the morning of the 14th Stark moved forward with his whole force towards Cambridge, and, at the distance of five or six miles, met Gregg retreating before the enemy, who were only one mile in his rear. Stark immediately halted and drew up his men in order of battle. Baum perceiving the Americans to be too strong to be attacked with his present force, also halted, commenced entrenching himself upon a commanding piece of ground and sent an express to Col. Breymen to hasten to his support. Stark, unable to draw them from their position, fell back about a mile with his main force, leaving only a small party to skirmish with the enemy, which they did so effectually as to kill or wound thirty of their number, two of whom were Indian chiefs, without any loss to themselves. Here he called a council of war, by which it was resolved that an attack should be made upon the enemy before they should receive any reinforcements. Stark, with the advice of Warner and other chief officers, having arranged his plans, gave orders for the troops to be in readiness to commence an assault on the following morning. The next day, however, proved to be rainy,

which prevented a general engagement, but there were frequent skirmishes between small parties, which resulted in such manner as to afford encouragement to the Americans, and to induce the Indians, attached to Baum's army, to desert in considerable numbers; "because," as they said, "the woods were filled with Yankees."

This unavoidable delay of a general engagement, enabled the enemy to complete their breast works and put themselves in a favorable condition for defence. Their principal force was strongly entrenched upon a rising ground on the north side of the Walloomscoik river, where there was a considerable bend in that stream, while a corps of Tories in the British service, were entrenched on the opposite side of the river, in lower ground. The river is small and fordable at all places. Stark's encampment was on the same side of the river as that of the main body of the enemy, but owing to the serpentine course of the stream, it crossed his line of march twice on his way to their position.

On the morning of the 16th of August, Gen. Stark was joined by Col. Symonds with a small body of militia from Berkshire county in Massachusetts, and, having reconnoitered the enemy's post, he proceeded to carry into effect the previous arrangements for the attack. Col. Nichols was detached with 200 men to the rear of the left wing of the enemy, and Col. Herrick with 300 men to the rear of their right wing. These were to join, and then make the attack. Colonels Hubbard and Stickney were also ordered to advance with 200 men on their right, and 100 in front to divert their attention from the real point of attack. As the divisions of Nichols and Herrick approached each other in the rear of the enemy, the Indians, apprehensive of being surrounded, made their escape between the two corps, excepting three killed and two wounded by the fire of the Americans as they passed.

Their positions being taken, at three o'clock in the afternoon the action was commenced by Col. Nichols, and his example was quickly followed by the other divisions. Gen. Stark advanced slowly in front, till the firing announced the commencement of the attack on the rear. He then rushed forward and attacked the division of Tories, and in a few moments the action became general. "It lasted," says Stark, in his official account, "two hours, and was the hottest I ever saw. It was like one continued clap of thunder." The German dragoons made a brave resistance, and, after their ammunition was

PLAN OF THE BATTLE GROUND.

RESULT OF THE ENGAGEMENTS.

expended, they were led on by Col. Baum, and attacked the Americans sword in hand. But their bravery was unavailing. They were finally overpowered, their works carried on all points, and their two cannon taken. Col. Baum was mortally wounded, and fell into the hands of the Americans, and all of his men, with the exception of those who escaped to the woods, were either killed or taken prisoners.*

The prisoners were now collected together and sent off under a strong guard to the meeting-house in Bennington, and Stark, unsuspecting of danger, suffered his men to scatter in pursuit of refreshments and plunder. In this state of things, intelligence was received that the re-enforcement of the enemy under Col. Breyden, with two field pieces, was rapidly approaching, and only two miles distant. Stark endeavored to rally his exhausted forces; but before he could put them in a condition to make an effectual resistance, the enemy advanced upon them in regular order, and commenced the attack. They opened an incessant fire from their artillery, and small arms, which was for a while returned by the Americans with much spirit; but, exhausted by fatigue and hunger, and overpowered by numbers, they at length be-

* The following Plan of the Bennington Battle Ground is reduced from the plan drawn by Lieut. Durnford, Col. Baum's engineer, and published in Burgoyne's State of the Expedition.



The long parallelograms denote the Americans—the parallel lines, unconnected at the ends, the enemy—the short parallelograms are buildings—the dark zig-zag lines, the enemy's breast works. T denotes the position of the Tories belonging to Baum's army. The Canadians were posted in the houses near where the road from Bennington to Saratoga crosses the Walloomscoik. A, the position of the Americans at the commencement of the battle.

gan slowly, but in good order, to retreat before the enemy, "disputing the ground inch by inch."

The remnant of Warner's regiment, which then consisted of only 130 men, had been suffered to remain at Manchester under Maj. Safford, as already stated. When the express arrived with orders for it to proceed to Bennington, many of the men were absent on scouts, and that, and other causes, prevented its marching till the 15th. Owing to the heavy rains on that day, it was near midnight when the corps arrived within one mile of Bennington. Here they encamped for the night, and a considerable portion of the next day was spent in putting their arms and equipments, which had been drenched by the rain, in a condition for battle.

As soon as these were in readiness and they had furnished themselves with ammunition, they proceeded down the Walloomscoik, and fortunately arrived upon the battle-field at the very moment when the Americans were beginning to fall back.* Disappointed that they had not been in season to take part in the first engagement and share in its glories, they now advanced forward and attacked the enemy with great spirit and resolution, "being determined," says Ethan Allen, "to have ample revenge on account of the quarrel at Hubbardton." The enemy, which had just been exulting in the prospect of an easy victory, was now brought to a stand, and more of the scattered militia being brought forward by Stark and Herrick, the action became general. The combat was maintained with great bravery on both sides till sun-set, when the enemy gave way, and were pursued till dark. With one hour more of day light, says Stark, in his official report, he should have captured their whole force.

In these two engagements, the Americans took four brass field pieces, 12 brass drums, four ammunition wagons, and about 700 prisoners with their arms and accoutrements. The number of the enemy found dead on the field was 207: their number of wounded not ascertained. The loss of the Americans was trifling in comparison with that of the enemy. They had 30 killed and about 40 wounded.

Nothing could be more encouraging to

*It has been generally supposed, and has been so represented in most of the accounts of the Bennington Battle, that Col. Warner was not present in the first engagement; but this is doubtless a mistake. Stark says expressly in his official letter that Warner was with him several days previous to the battle and acknowledges his assistance in planning it. The mistake probably arose from the fact that Warner's regiment was not in the first engagement, but arrived just in season to decide the fate of the second, as above stated.

ST. LEGER.

GEN. LINCOLN.

BATTLE AT STILLWATER.

the Americans, or disheartening to the enemy, than this splendid victory of Stark, achieved principally by undisciplined militia, over veteran regular troops. Since the fall of Montgomery, an uninterrupted series of defeats had attended the American arms in the northern department, and many of the most ardent in the cause of freedom had begun to despond. But, by this event, they discovered that their enemy was not invincible,—their hopes and their courage were revived, and volunteers from every quarter flocked to the American standard. It also enabled Stark to vindicate his attachment to the cause of his bleeding country, and to render that cause a service far more important than he could have done by joining the main army on the Hudson.

After their disasters at Bennington the British army remained quietly at their camp opposite to Saratoga for some time, awaiting the approach of Col. St. Leger, who had been sent round by the way of lake Ontario, for the reduction of fort Stanwix on the upper part of the Mohawk river. But they waited in vain. That officer, after encountering many difficulties, was obliged, through the defection of the Indians belonging to his corps, to retreat without accomplishing the object of the expedition. These events had not only retarded the advance of Burgoyne, but they served to depress the spirits of the royal army, while they at the same time encouraged the Americans, and afforded Gen. Gates, who had now superseded Gen. Schuyler, time to strengthen and fortify his camp.

In the mean time, Gen. Lincoln, who commanded a body of New England militia, determined to make a diversion in the rear of the enemy. He accordingly proceeded from Manchester to Pawlet, and from thence on the 13th of September, despatched Colonel Brown with 500 men to destroy the British stores and release the American prisoners, which were collected at lake George. At the same time he ordered Colonel Johnson with an equal number of men to proceed towards Ticonderoga to divert the attention of the enemy, while Brown was accomplishing his object. In addition to these, he detached Col. Woodbridge with 500 men by the way of Skenesborough and fort Ann to fort Edward. The design of these expeditions was to alarm and divide the British forces, and to cut off their supplies.

Brown proceeded with such secrecy and celerity, that by the 18th of September he had surprised all the out posts between the landing place at the north end of lake George and the main fortress at

Ticonderoga. The Americans had likewise recovered Mount Hope, Mount Defiance, 200 batteaux, one armed sloop and a number of gun boats; and they had taken 293 prisoners, and had liberated more than 100 Americans. Encouraged by this success, they summoned General Powel, the British commander of Ticonderoga, to surrender that fortress, but not being in a condition to make any effectual attempt against it, they returned in safety, and with scarcely any loss, to Lincoln's camp.

General Burgoyne crossed the Hudson on the 13th and 14th of September, and advanced towards the American army, which was posted at Stillwater. On the 18th, 3000 Americans marched out with a view of attacking the enemy, but finding that the attempt would be too hazardous, they remained during the day in full view of the royal army, without commencing the attack. On the 19th, Gen. Burgoyne put himself at the head of the right wing of the British army, and advanced towards the left of the Americans. Gens. Philips and Riedesel at the same time advanced along the river towards the right. About one o'clock, some of the American scouts fell in with those of the British, and attacked them with great boldness.

The firing was no sooner heard than the advanced parties of both armies pressed forward to battle. Re-enforcements were continually sent on upon both sides and the contest soon became obstinate and general. The first attempt of the Americans was to turn the right wing of the British army and flank their line. Failing in this, they moved in regular order to the left, and there made a furious assault. Both armies were determined to conquer, and the battle raged without intermission for three hours. Any advantage on one side was soon counterbalanced by an equal advantage on the other. Cannon and favorable positions were taken, lost and re-taken in quick succession; and the two armies might be compared to the two scales of a mighty balance, trembling with equal burdens in doubtful oscillation, and, had not night put an end to the struggle, it is extremely doubtful which would have preponderated.

This engagement, though undecisive, was advantageous to the Americans. The British lost in killed, wounded and prisoners, more than 500 men, while the loss of the Americans amounted to 64 killed, 217 wounded and 38 missing. But the principal advantage arose from the new impressions which were made upon the minds of the royal army. They had hitherto regarded the American army as an

SECOND ACTION NEAR STILLWATER.

SURRENDER OF BURGOTNE.

unorganized assemblage of cowardly Yankees, which could never be brought to face regular British and German troops upon the field of battle. And when they came to see those, whom they regarded as despicable back-woodsmen, maintaining, in their rustic homespun and leather aprons, with no other arms than rusty fowling pieces, an animated and determined attack upon the royal troops, till darkness put it out of their power to continue it, their hearts sunk within them, and the most sanguine could not suppress fearful forebodings with regard to the termination of their expedition.

The Indians in particular, were so disheartened, that nearly all of them immediately left the British service, and about 250 of them came over and joined the American army. The Canadians and Tories also deserted in large numbers. From the 20th of September to the 7th of October, the two armies lay very near each other and skirmishes between small parties were continually kept up. During this time the American army was receiving daily accessions from the surrounding country, while that of the British was continually diminishing by desertion and other causes. On the 7th, General Burgoyne put himself at the head of 1500 regulars, for the purpose of covering a foraging party, and discovering whether it would be possible to force a passage down the Hudson, should it be found necessary to alter his position.

As soon as Gates received intelligence of the marching of this detachment, he put his troops in motion to meet them, and about four o'clock in the afternoon an action commenced which continued till night, and was one of the most animated and obstinate ever fought in America. The British troops were at length compelled to retreat to their camp, and some of their entrenchments were carried by the Americans sword in hand; their loss in the conflict was very severe, compared with that of the Americans. Gen. Fraser, Col. Breyden and several other officers were slain, and Sir James Clark, Major Williams and Maj. Ackland were wounded and taken prisoners. The Americans took in the whole, 200 prisoners, nine pieces of cannon, and a large quantity of ammunition and camp equipage.

As the force of Burgoyne was thus constantly diminishing, while that of Gates was daily augmenting by fresh arrivals, it became obvious that nothing short of a retreat to Canada could now prevent the complete overthrow of the royal army. This Burgoyne attempted as a dernier resort, but soon found that the Americans

had so completely hemmed him in, as to render it utterly impracticable. Gates now employed every means to cut off the supplies of the enemy, and the situation of the royal army became so desperate, that, on the 13th of October, Burgoyne called a council of war, by which it was unanimously determined to propose a capitulation. The next day, Major Kingston was sent to the Americans; hostilities were suspended; and on the 15th and 16th, the articles of capitulation were severally agreed upon, and were to be signed the next day. During the night of the 16th, Burgoyne received intelligence that a British army was advancing up the Hudson to his assistance; and as the capitulation was not yet signed, he was of opinion that it was best to suspend the execution of it, and trust to events. But his council decided that the public faith was already pledged for the execution of the treaty.

Gates, who was well apprised of the advance of the British up the Hudson, and fearful that Burgoyne might be encouraged by it to further resistance, got every thing in readiness for attacking him on the morning of the 17th. At nine o'clock, the time fixed for signing the articles, he sent Colonel Groat on horseback to General Burgoyne for his signature, allowing him only ten minutes to go and return. The business was accomplished in the time specified, and the Americans marched back to their camp to the tune of Yankee-Doodle. The whole number of troops, which were surrendered by this capitulation, was 5752, together with all the arms and military stores belonging to the British army.

This event terminated the career of Burgoyne and of the northern British army in America, and nearly put an end to the war in the vicinity of Vermont. The regular force under Gates was moved off to combat the enemy in other quarters, and the sturdy yeomanry, who had rallied around his standard and fought the battles of their country, now returned to their homes. The country which had been made desolate by the ravages of war, began again to be inhabited; and the inhabitants were allowed once more to devote their attention to their civil and domestic affairs.

We have been thus particular respecting the invasion of Burgoyne, as well on account of its effects in breaking up the settlements in the western parts of Vermont, as of the important part performed by the Green Mountain Boys in checking, and finally capturing the British army. In this business the people of Ver-

mont made common cause with those of other states, and we have therefore not interrupted our account of the great events of the revolution which transpired upon our borders, by any account of our internal policy. We shall, however, pro-

ceed in the next chapter, to consider more particularly the situation of Vermont, with respect to her internal government, and her relations to the neighboring states, and to the British forces in Canada, during the war for Independence.

CHAPTER IV.

CIVIL POLICY OF VERMONT DURING THE REVOLUTION.

SECTION I.

From the year 1775, to the Declaration of the Independence of Vermont in 1777.

Having completed our account of those important events in the American war, in which the people of Vermont were more particularly concerned, we shall now turn our attention to their internal policy, and endeavor to trace the successive steps by which the powers of government were assumed, and their political fabric erected. The New Hampshire grants, having never been recognized by the king as a separate jurisdiction, and having ever refused submission to the authority of New York, were, at the commencement of the revolution, nearly in a state of nature, being without any internal organization under which the inhabitants could act with system and effect. Their only rallying point and bond of union, was their common interest in resisting the claims and authority of New York. Yet the same interests which drove them to resistance, gave the effect of law to the recommendations of their committees and the orders of their councils of safety, while a few bold and daring spirits, as if formed for the very occasion, gave impulse, and energy, and system to their operations.

Thus situated were the inhabitants of the New Hampshire grants, when the first scene of the great drama of the revolution was opened at Lexington, and, as all lesser lights are swallowed up in the superior splendor of the sun, so were all the minor controversies among the colonists for a while absorbed in the more momentous controversy with the mother country. But the partial relief now experienced from the oppression of New York served only to discover to the inhabitants of the Grants the frailty of their bond of

union, and to convince them of the necessity of a better organization, both to enable them to maintain the grounds, which they had assumed in relation to New York, and to put it in their power to render efficient aid to their countrymen in the contest with Great Britain.

Accordingly, in the fall of the year 1775, several of the leading men in the Grants, repaired to Philadelphia, where the American Congress was then sitting, to procure the advice of that body with regard to the course proper to be pursued, under existing circumstances, by the inhabitants of the Grants. Congress did not act formally upon their request, but on the return of these men to the Grants, they spread circulars among the people, setting forth as the opinion of several influential members of that body, that the inhabitants should immediately form a temporary association and adopt such regulations as were required by the exigencies of their situation.

A convention of delegates from the several towns was accordingly assembled at Dorset, on the 16th of January, 1776. This convention forwarded a petition and address to Congress,* in which, after giving a brief sketch of the controversy with New York, they avowed their unwavering attachment to the cause in which the colonies had unsheathed the sword, and expressed their willingness to bear their full proportion of the burden of prosecuting the war. But at the same time, they declared their unwillingness to be considered as in any manner subject to the authority, or jurisdiction of New York, or to be called upon, when their services

* For this petition and the resolutions of Congress respecting it, see Slade's State Papers, pages 63 and 64. The persons appointed to present this petition, were James Breckenridge, Heman Allen and Jonas Fay.

CONVENTION AT DORSET.

should be required, as inhabitants of that province.

This was the first petition of the inhabitants of the Grants to Congress, and the committee to whom it was referred reported, that it be recommended to the petitioners to submit for the present to the government of New York, and assist their countrymen in the contest with Great Britain; but that such submission ought not to prejudice their right to any lands in controversy, or be construed to affirm, or admit, the jurisdiction of New York over the country, when the present troubles should be ended. Mr. Heman Allen, the agent by whom this petition was forwarded, considering the report of the committee unfavorable to the Grants, obtained leave to withdraw the petition, and thus prevented Congress from coming to any decision upon the subject. This took place on the 4th of June, 1776, and on the 4th of July following, Congress published to the world the memorable declaration of American Independence.

By this declaration of Independence, the people on the New Hampshire grants were placed in a situation more difficult and embarrassing than before, and there were various opinions with regard to the course which should be pursued. Some thought it best to place themselves under the jurisdiction of New Hampshire: some considered the submission of the Grants to the authority of New York, the only course of safety; but the more resolute and influential were for assuming the powers of government and hazarding the consequences. To ascertain the state of public opinion on this subject, it was determined that a general convention should be called, and circulars were accordingly addressed to the different towns, requesting them to appoint delegates.

There was a general compliance with this request, and delegates from thirty-five towns assembled at Dorset on the 24th of July, 1776.* At this session it was agreed by the delegates to enter into an association among themselves for the defence of the liberties of their country. But at the same time they resolved that they would not associate with, or submit to, the provincial government of New York, and that all such inhabitants of the Grants as should thus associate, or submit, should be regarded as enemies to the common cause. This convention met again by adjournment at the same place on the 25th of September, and resolved unanimously, "to take suitable measures,

* The proceedings of this convention may be seen in Slade's State Papers, page 66.

DECLARATION OF INDEPENDENCE.

as soon as may be, to declare the New Hampshire grants a free and separate district."

On the 15th of January, 1777, the convention met again at Westminster.* The sentiments of their constituents were now well ascertained, and, being convinced that there was now no other way of safety left, they on the 16th of that month published the following declaration: "This convention, whose members are duly chosen by the free voice of their constituents, in the several towns on the New Hampshire grants, in public meeting assembled, in our own names, and in behalf of our constituents, *do hereby proclaim and publicly declare, that the district of territory comprehending, and usually known by the name and description of the New Hampshire grants, of right ought to be, and is hereby declared forever hereafter to be, a free and independent jurisdiction, or state; to be forever hereafter called, known, and distinguished by the name of New Connecticut, alias VERMONT.*"

And this declaration of independence furthermore asserts, "that the inhabitants who at present are, or who may hereafter become residents, either by birth or emigration, within said territory, shall be entitled to the same privileges, immunities and enfranchisements as are allowed, or may hereafter at any time be allowed, to the inhabitants of any of the free and independent states of America: And that such privileges and immunities shall be regulated in a bill of rights, and by a form of government to be established at the next session of this convention."†

The foregoing declaration was unanimously adopted by the convention; after which they drew up a declaration and petition to Congress, in which they announced to that body, as the grand representative of the United States, that they had declared the territory, commonly known by the name of the New Hampshire grants, a free and independent state, possessing the right to regulate their own internal policy in any manner which should not be repugnant to the resolves of Congress. They moreover declared their attachment to the common cause and expressed their willingness to contribute their full proportion towards maintaining the war with Great Britain. They closed by praying that their declaration might be acknowledged by Congress and that delegates from Vermont might be ad-

* The proceedings at Westminster may be found in Slade's State Papers, page 70, and in Williams' History, Vol. II. page 450.

† For the Bill of Rights and Form of Government, see Chapter VII.

mitted to seats in that body. This declaration and petition was signed, and was presented to Congress by Jonas Fay, Thomas Chittenden, Heman Allen and Reuben Jones, four of the most respectable members of the convention. *

These prompt and decisive measures of the convention evinced the wisdom and boldness of the statesmen, who at this period directed the affairs of Vermont, and placed the community in a condition to adopt an efficient organization of its own. Vermont, in justification of the course of policy she was pursuing, contended that she had the same right to assume the powers of government, which was possessed by the continental Congress, and that every consideration, which could justify the proceedings of that body, might be urged as a reason why the people of Vermont should embrace the present opportunity, effectually to secure themselves against the oppression under which they had so long suffered. Happy was it for the new state, that these measures were adopted and supported with that firmness and temperance, which were alone adequate to secure a happy result.

SECTION II.

Establishment of the Government of Vermont—from the Declaration of Independence, January 15, 1777, to the meeting of the General Assembly on the 12th of March, 1778.

These proceedings of Vermont, by which she had declared herself to be a separate and independent jurisdiction, were regarded with very different feelings by the neighboring states. While New Hampshire, Massachusetts and Connecticut were ready to admit Vermont as a new member of the federal union, and applauded the spirit and boldness with which she asserted and maintained her rights, New York regarded these transactions as open acts of treason and rebellion against the lawful authority of that state. With these views, the convention of New York, on the 20th of January, 1777, and again on the 1st of March, of the same year, addressed communications to Congress,† in which they represented the proceedings of Vermont as resulting from the arts and instigations of designing men, and not, as had been represented, from a general desire of the inhabitants of that district to

renounce their allegiance to the authority of New York.

They complained of the injuries done them by Congress in the appointment of officers in the disaffected portion of their state without their consent, and intimated their apprehensions that it was the design of Congress to countenance the insurgents in their rebellion. They urged upon Congress the necessity of immediately recalling the commissions given to Col. Warner and the officers under him, as an act of justice to New York, and as the means of opening the eyes of the "deluded people" on the Grants, who had set up for a separate jurisdiction, and were now desiring Congress to sanction their illegal proceedings. They represented the influence of Warner as very inconsiderable, even in the disaffected district, and that his services were a matter of no consequence to the country.

While New York was thus laying her grievances before Congress, and using all her influence to prevent that body from recognizing the independence of the Grants, the internal affairs of Vermont were rapidly assuming that form and regularity, which was calculated to insure a permanent and efficient organization of the government. In April, Thos. Young, a distinguished citizen of Philadelphia, addressed a communication to the inhabitants of Vermont, in which he represented it as the opinion of several of the leading members of Congress, that Vermont should proceed in her organization, form a constitution, and appoint delegates to Congress; and he declared it to be his own individual opinion that Congress would not hesitate to sanction their proceedings, or to admit their delegates to a seat in that honorable body.*

This communication was prefixed to a resolution, which Congress had passed on the 15th of May, 1776, which recommended to the assemblies and conventions of the United Colonies, where no government, sufficient to the exigencies of their affairs, had already been established, to adopt such government as, in the opinion of the representatives of the people, should best conduce to the happiness and safety of their constituents. This resolution was regarded by the author of the communication, as a full license from Congress to the Grants, to assume the powers of government, and he recommended that no time be lost in availing themselves of the present opportunity to establish a separate dominion.

*Slade's State Papers, page 70—Williams' History Vol. II. page 453.

† For these documents see Slade's S. P., page 73.

* An extract from this communication may be seen in Slade's State Papers, page 76.

PROCEEDINGS OF CONGRESS.

CONVENTION TO FORM A CONSTITUTION*

Alarmed at the suggestions in the foregoing communication of Thomas Young, the council of safety of New York proceeded, on the 28th of May, to make a further effort to arrest the progress of Vermont. With this view they addressed a letter to the president of Congress, in which they say that, "as a report prevails and daily gains credit, that the revoltors are privately countenanced in their designs by certain members of Congress, we esteem it our duty to give this information, that by a proper resolution on the subject, the reputation of Congress may cease to be injured by imputations so disgraceful and dishonorable. However unwilling we may be to entertain suspicions so disreputable to any member of Congress, yet the truth is, that no inconsiderable numbers of the people of this state do believe the report to be well founded."

With a view of bringing Congress to a decision on the subject of this controversy, on the 23d of June, one of the New York delegates laid before that body the communication of Thomas Young to the inhabitants of Vermont. Congress now took up the matter, and the petitions and communications from New York and the New Hampshire grants, were referred to a committee of the whole. This committee, on the 30th day of June, among other things resolved, that Congress would not recommend or countenance any thing injurious to the rights and jurisdiction of the several communities herein represented,—that the inhabitants of the New Hampshire grants cannot be justified in their declaration of independence, by the example of the United Colonies, nor by any act or resolution of Congress,—that the petition of Vermont, to be recognized as an independent state, and to have her delegates admitted to seats in Congress, be dismissed. They farther resolved that the communication of Thomas Young was derogatory to the honor of Congress, and contained a gross misrepresentation of the resolution of that body therein referred to, and was calculated to mislead the people to whom it was addressed.

While Congress were thus resolving to dismiss the petition of the inhabitants of Vermont, and utterly to discountenance their proceedings, the people of Vermont were engaged in forming a constitution for the regulation of their civil government, being fully persuaded that their independence must now be supported with the same firmness and spirit with which it had been declared. The same convention which had declared the independence of Vermont, met, by adjournment, at Windsor on the first Wednesday of June,

and appointed a committee to make a draft of a constitution for the state. They also adopted a resolution, recommending that the several towns appoint delegates to meet in convention at Windsor, on the 2d day of July following, for the purpose of discussing and adopting said constitution.

In compliance with the foregoing resolution, the convention assembled at Windsor, on the 2d day of July, and a draft of a constitution was presented and read. While the convention were deliberating upon, and adopting the several articles of this important instrument, they received the news of the evacuation, on the 6th of July, of Ticonderoga by the American troops. This event left the whole western border of Vermont exposed to the enemy, and spread alarm and consternation through this and the neighboring states. "In this awful crisis," says Allen, in his History of Vermont, "the convention was for leaving Windsor; but a severe thunder storm came on and gave them time to reflect; while some members, less alarmed at the news, called the attention of the convention to finish the constitution, which was then reading, paragraph by paragraph, for the last time. This was done, and the convention appointed a council of safety to act during their recess, and adjourned."

Immediately after the adjournment of the convention, the council of safety of Vermont wrote to the councils of safety of Massachusetts and New Hampshire, setting forth their exposed condition since the abandonment of Ticonderoga, and calling upon them in the most pressing terms for assistance. These communications were dated at Manchester, July 15th, 1777.* Upon this application, the council of safety of New Hampshire immediately convened the assembly of that state, who without delay placed a large body of their militia under the command of Gen. Stark, and ordered him to repair to Charlestown on Connecticut river; consult with the council of Vermont with regard to supplies and future operations; and act in conjunction with the troops of that or any other state, or of the United States, as in his opinion would tend most effectually to stop the progress of the enemy on the western frontier. These orders were promptly obeyed, and these troops, in conjunction with those of Vermont, at Bennington, gave the enemy the first effectual check, as related in the preceding chapter.

* For the correspondence with New Hampshire see Slade's State Papers, page 79.

Previous to the adjournment of the convention, it had been ordered that the first election under the constitution should take place in December, 1777; and that the representatives then elected, should meet at Bennington in January following. Public attention was, however, so much engrossed by the advance of the enemy under Burgoyne, that the constitution was not printed in season to have the election take place at the time appointed. The convention was, therefore, again called together at Windsor by the council of safety, on the 24th of December, where they revised the constitution, and postponed the day of election to the first Tuesday of March, 1778, and the meeting of the assembly to the second Thursday of the same month.

The manner in which these proceedings of Vermont were viewed by New Hampshire and New York, is obvious from the style of their communications during this period. In answer to the application of the council of safety of Vermont for assistance, Mr. Weare, president of the council of New Hampshire, addressed Vermont as a free and sovereign, but new state, and in such terms as to leave no doubt but that New Hampshire willingly acknowledged her independence. But not so with New York. The proceedings of Vermont, it is true, had changed her policy, but had by no means reconciled her to a relinquishment of her jurisdiction over the Grants. In his proclamation addressed to the inhabitants of the Grants, February 23d, 1778,* the Governor of New York, after confirming their titles to their lands in particular cases, and making several concessions in their favor, expressly declares, that that government "*will vigorously maintain its rightful supremacy over the persons and property of those disaffected subjects.*"

The overtures in the proclamation of Governor Clinton, from which the above extract is taken, have a semblance of fairness which might have misled a people less discerning, and less jealous of their rights than they to whom they were addressed. But the people of Vermont had been too long accustomed to a thorough investigation of every point in the controversy not to perceive that these overtures held out no prospect of substantial relief. They perceived at once that New York was now endeavoring to effect that by policy, which she had heretofore vainly attempted by force. They had ever acted upon the conviction that the claims of New York were groundless; and, hav-

ing now declared their independence and adopted a constitution, they were by no means to be cajoled into an acknowledgment of the "supremacy" of that state. An answer to this proclamation was afterwards published by Ethan Allen, in which he points out its sophistry, shows that its overtures "are all romantic, designed only to deceive woods people," and he exhorts his fellow citizens to maintain inviolate the supremacy of the legislative authority of the independent state of Vermont, as the only means of security to their persons and property; and he closes with the following bold and energetic address to the people of Vermont:

"You have experienced every species of oppression, which the old government of New York, with a Tryon at its head, could invent and inflict; and it is manifest that the new government are minded to follow nearly in their steps. Happy is it for you that you are fitted for the severest trials! You have been wonderfully supported and carried through thus far in your opposition to that government. Formerly you had every thing to fear from it, but now little; for your public character is established, and your cause known to be just. In your early struggles with that government, you acquired a reputation for bravery; this gave you a relish for martial glory, and the British invasion opened an ample field for its display, and you have gone on conquering and to conquer until TALL GRENADIERS are dismayed and tremble at your approach. Your frontier situation often obliged you to be in arms and battles; and by repeated marchings, scoutings and manly exercises, your nerves have become strong to strike the mortal blow. What enemy to the state of Vermont—or New York land-monopolizer, shall be able to stand before you in the day of your fierce anger."*

SECTION III.

Controversy with New Hampshire in 1778 and 1779—Legislative proceedings of Vermont.

After the royal decision of the controversy between New Hampshire and New York, in favor of the latter, in 1764, New Hampshire had made no attempt to continue her jurisdiction over the disputed

* See Blad's Vt. State Papers, page 82.

* The work from which this extract is taken, is entitled 'An Animadversory Address to the inhabitants of the State of Vermont, with Remarks on a Proclamation, under the hand of his Excellency, George Clinton, Esq. Governor of the State of New

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territory. Hence we have hitherto had occasion to consider the people of Vermont only in their relation to the government of New York; but the declaration of their independence and the organization of their government were, in their consequences, the occasion of new difficulties, not only with New York, but also with New Hampshire and Massachusetts.

The original territory of New Hampshire was granted to John Mason, and was bounded on the west by a line sixty miles from the sea. The lands between this line and Connecticut river, were royal grants, and belonged to New Hampshire by virtue of the commissions of the governors of that province. Vermont had no sooner organized her government than the inhabitants on these lands manifested their desire to dissolve their connection with New Hampshire, and unite with Vermont. In their justification, they contended, that all the territory west of Mason's grant, had been held in subjection to New Hampshire by force of the royal commissions—that when the royal authority ceased in the colonies, in consequence of the declaration of independence, their allegiance to New Hampshire ceased, and they were left at liberty to form a separate government, or to unite with such neighboring government as would consent to a union.

With these views of their relations to New Hampshire, the people on the territory between Mason's grant and Connecticut river, proceeded to make arrangements for proposing a connection with Vermont. The Legislature of Vermont met, for the first time, on the 12th of March, 1778, at Windsor, and the same day a petition was presented from sixteen towns on the east side of Connecticut river, praying to be admitted to a union with Vermont. The Legislature was much embarrassed by this application. Most of the members from the west side of the mountains regarded the union as a dangerous measure, and the majority of the assembly appeared to be against it; yet several of the towns in Vermont on Connecticut river were very desirous that the towns from New Hampshire should be received, and went so far as to propose withdrawing from their connection with Vermont, and setting up another state. In this state of things, and for the purpose of preserving its own union, the

legislature voted, on the 18th of March, 1778, to refer the decision of the question to the people.

The Legislature met again by adjournment on the 4th of June, at Bennington, when it appeared that a majority of the towns were in favor of the union with the sixteen towns from New Hampshire; and, June 11th, it was "voted that the union take place—thirty-seven in the affirmative and twelve in the negative." It was also voted that any other towns on the east side of Connecticut river might be admitted to a union, on producing a vote of the majority of the inhabitants, or on their sending a representative to the assembly of Vermont. Having thus effected their purpose, the sixteen towns informed the government of New Hampshire that they had withdrawn from their jurisdiction, and wished the division line to be established and a friendly intercourse to be kept up.

Those who were anxious for this union had represented to the Legislature, that the inhabitants of the sixteen towns were nearly unanimous in their votes to join Vermont, and that New Hampshire, as a state, would not object to their withdrawing from her jurisdiction. But the event proved both these representations to be false. The government of New Hampshire was justly incensed at the proceedings. Mr. Weare, President of the Council of New Hampshire, wrote to Congress on the 19th of August, to procure advice, and, in case of necessity, the interference of that body.* On the 22d of August, he, in the name of the general assembly of that state, wrote to Mr. Chittenden, governor of Vermont, claiming the sixteen towns as a part of New Hampshire.† He stated that a large portion of the inhabitants of those towns were opposed to the union, that this minority had claimed the protection of the state, and that the government of New Hampshire considered itself bound to protect them. He urged Gov. Chittenden to exert his influence with the legislature, to dissolve a connection, which would endanger their peace and probably their political existence.

On the reception of this communication, Governor Chittenden convened the council, and it was agreed that Colonel Ethan Allen should repair to Philadelphia and ascertain how the proceedings of Vermont were regarded by Congress. On his return, he reported that Congress was unanimously opposed to the proceedings of Vermont in relation to the union with

York. By Ethan Allen.' It was dated Bennington, August 9, 1778, and printed at Hartford, Ct. in a neat pamphlet of 24 pages, and is now in the possession of the author. The substance of this pamphlet was afterwards incorporated into Allen's 'Vindication of Vermont,' and may also in part be found in Slade's Vt. State Papers, page 85.

* For this letter, see Slade's State Papers, p. 90.

† Ibid. page 91.

New Hampshire; but that if those proceedings were disannulled, only the delegates from New York would oppose their independence.* The Legislature met again by adjournment on the 8th of October, 1778, at Windsor, and, having received the report of Col. Allen, Oct. 13th, they took up the subject of the union.

At the first session of the Legislature in March, the state had been divided into two counties, Bennington on the west side of the mountains, and Cumberland on the east. After considering and debating the subject of their connection with the sixteen towns from New Hampshire, from the 13th to the 21st of October, votes were taken in the Legislature on the following questions, the result of which evinced the determination of a majority of the members to proceed no further in that hazardous experiment. *Question 1st.* Shall the counties in this state remain as they were established in March last? This question was decided in the affirmative; yeas 35, nays 26. *Question 2d.* Shall the towns on the east side of the Connecticut river, which have been admitted to a union with Vermont, be included in the county of Cumberland? *Question 3d.* Shall said towns be erected into a county by themselves? The last two questions were both decided in the negative; yeas 28, nays 33.†

Finding by these votes that the Legislature did not incline, at present, to do any thing more on the subject of the union, the representatives from the towns on the east side of the Connecticut withdrew from the assembly, in which they had been admitted to seats, and were followed by fifteen representatives from towns on the west side of the river, together with the lieutenant governor, and two of the council. After these members had withdrawn, the number left was barely sufficient to constitute a quorum. They, therefore, proceeded to transact the remaining business of the session, and adjourned on the 24th of October, to meet again at Bennington on the second Thursday of February next, having resolved to refer the subject of the union with New Hampshire to their constituents for instructions how to proceed at their next session.

The seceding members, after entering a formal protest upon the journals against the proceedings of the assembly, held a meeting, at which they made arrangements for calling a convention, to which they invited all the towns in the vicinity of Connecticut river to send delegates.

The object of this convention was to establish a government in the valley of the Connecticut, the centre and seat of which should be somewhere upon that stream. The convention met at Cornish, New Hampshire, on the 9th of December, and a union was agreed upon by the majority of the delegates, without any regard to former limits, and a proposal was made to New Hampshire, either to agree with that state upon a division line, or to submit it to Congress, or to arbitrators mutually chosen. In case neither of these proposals was accepted, they proposed that they would consent that all the grants should be united with New Hampshire, and altogether become one entire state, co-extensive with the claims of New Hampshire previous to the royal decision in 1764. Till one of these proposals was acceded to, they "resolved to trust in providence and defend themselves."

Only eight towns on the west side of Connecticut river were represented in this convention, and the delegates from some of these declined taking any part in making the foregoing proposals to New Hampshire. From the proceedings of this convention, it became obvious that the whole aim of the leading men in the vicinity of Connecticut river, was to establish such a government as to bring themselves in the centre, and it did not appear to be material with them whether this was effected by a union of a part of New Hampshire with Vermont, or by bringing the whole of Vermont under the jurisdiction of New Hampshire. The people of Vermont were now fully sensible of the impolicy, as well as injustice, of aiding in the dismemberment of New Hampshire, and they were wise enough to embrace the first opportunity to retrace their steps, and dissolve a connection which threatened their ruin.

The legislature of Vermont met at Bennington, according to adjournment, on the 12th of February, 1779, and the next day they voted to dissolve the union which had subsisted between them and the towns in New Hampshire.* This determination of the legislature of Vermont was immediately communicated to the government of New Hampshire by Ira Allen, and was received while efforts were making to gain the assent of that government to the proposals made by the Cornish convention. Encouraged by these divisions, the legislature of New Hampshire now resolved to lay claim, not only to the sixteen towns, which had united with Vermont, but to the whole

* For a copy of this report see Slade's State Papers, page 92. † For these proceedings, see Ibid. p. 94.

* For these proceedings see Slade's State Papers, page 102.

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state of Vermont, as grants originally made by that province. Application was made to Congress for a confirmation of this claim, and at the same time New York applied to that body for a confirmation of *her* title to the territory in question.

Circumstances connected with these applications convinced the people of Vermont, that they were the result of the intrigues of the leading men in those states, and were designed to effect a division of Vermont between them, by a line along the summit of the Green Mountains.* As the other states in general took but little interest in these controversies, and as the adjustment of them was embarrassing to Congress, it was thought that, if New Hampshire and New York should agree, it would be left pretty much to those two states to settle the affairs of Vermont between them, in which case Vermont must certainly lose her separate existence as a state. But either to disappoint the parties, which appeared to be resolved on the annihilation of Vermont, or for some other cause, Massachusetts now interposed, and claimed a portion of the disputed territory, as within her jurisdiction. Thus was Vermont struggling to maintain her independence against the three adjoining states, which were all claiming her territory and the right of jurisdiction, nor had her proceedings yet received any countenance or encouragement from the continental Congress.

SECTION IV.

Controversy with New York, New Hampshire and Massachusetts, in 1778, 1779, and 1780.

During the troubles, resulting from the union with a part of New Hampshire, and which have been mentioned in the preceding section, Vermont was still as deeply as ever involved in the controversy with New York; but now, events transpired in the southeastern part of the county of Cumberland, which gave to that controversy a much more alarming aspect. On the 7th of July, 1778, Governor Clinton wrote to his friends in Vermont, recommending, that wherever the partizans of New York were sufficiently powerful, firm resistance should be made to the draughting of men, the raising of taxes, and to all the acts of the "ideal Vermont State; and also "that associations be formed for mutual defence against this usurpation." At the same time he

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wrote to Congress, urging their decision of the controversy, and blaming the people of Vermont for the violence of their proceedings.

In conformity to the recommendation of Governor Clinton, the friends of New York met in convention at Brattleboro', on the 4th of May, 1779, and, having organized, drew up a petition to the Governor of New York, in which, after stating the summary manner in which the *pretended* State of Vermont was proceeding to confiscate their property, and various other grievances, they "entreat his excellency to take immediate measures for protecting the loyal subjects of that part of the state, and for convincing Congress of the impropriety of delaying a decision in a matter, which so nearly concerned the peace, welfare and lives of many of their firm adherents."* About the same time a military association was formed in Cumberland county for the purpose of opposing the authority of Vermont.

In consequence of representing that they had a regiment of 500 men, and of making some other false assertions, several commissions had been obtained from Governor Clinton; and the government of Vermont, therefore, found it necessary to take measures to put a stop to these military movements. Ethan Allen was accordingly ordered by the governor to call out the militia for that purpose. When the adherents of New York were informed of these transactions on the part of Vermont, Col. Patterson, who held a commission in the county of Cumberland under the authority of New York, wrote to Governor Clinton, May 5th, for directions how to proceed, and suggested the necessity of sending the militia of Albany county to his assistance. This letter and the foregoing petition were answered by the governor with assurances of protection; and he recommended that the authority of Vermont should not be acknowledged, except in the alternative of submission or inevitable ruin.

On the 18th of May, Governor Clinton wrote to the president of Congress, "that matters were fast approaching to a very serious crisis, which nothing but the immediate interposition of Congress could possibly prevent; that he daily expected he should be obliged to order out a force for the defence of those who adhered to New York; that the wisdom of Congress would suggest to them what would be the consequence of submitting the controversy, especially at this juncture, to the decision of the sword; but

* See Williams' History, Vol. II. page 184.

* For this petition see Slade's Vermont State Papers, page 106.

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that justice, the faith of government, the peace and safety of society would not permit them to continue any longer passive spectators of the violence committed on their fellow citizens." * This letter and sundry other papers relating to the disputes were laid before Congress on the 29th of May, 1779, and were referred to a committee of the whole; and on the first day of June, Congress resolved "that a committee be appointed to repair to the inhabitants of a certain district, known by the name of the New Hampshire grants, and inquire into the reasons why they refuse to continue citizens of the respective states, which have claimed jurisdiction over the said district. And that they take every prudent measure to promote an amicable settlement; and to prevent divisions and animosities, so prejudicial to the United States." †

While Congress was engaged in passing these resolutions, Allen marched with an armed force and made prisoners of the colonel and other officers who were acting under the authority of New York. Complaint was immediately made to Governor Clinton, with an earnest request that he would take speedy measures for their relief. Governor Clinton wrote again to Congress on the 7th of June, stating what had taken place, disapproving of the resolutions of Congress before mentioned, and requesting that the committee, appointed to repair to the New Hampshire grants, might postpone their visit till after the next meeting of the New York legislature. June 16th, Congress resolved that the officers captured by Allen should be liberated, and that the committee above mentioned be directed to inquire into the circumstances of that transaction. ‡

Of the five commissioners appointed to repair to Vermont, two only attended—Dr. Witherspoon and Mr. Atlee. These gentlemen repaired to Bennington in June, had several conferences with the friends of Vermont, and, also, with others, who were in the interest of New York. It seems to have been the aim of these commissioners to effect a reconciliation between the parties; but it appears from the report, which they made to Congress on the 13th of July, that they did not succeed in accomplishing the object of their mission. Four parties were now claiming the same tract of country, and each of these parties had applied to Congress for a decision of the controversy. Under such circumstances, Congress could not well avoid taking up the matter; and among others, on the 24th of September,

1779, passed several resolutions, the substance of which was as follows: *

Resolved, that it be earnestly recommended, that New Hampshire, Massachusetts and New York expressly authorize Congress to determine their disputes relative to their respective boundaries—and that on the first of February next, Congress will proceed to settle and determine the same, according to equity. It was, moreover, declared to be the duty of those inhabitants of the New Hampshire grants, who did not acknowledge the jurisdiction of either of the above named states, to refrain from exercising any power over such of the inhabitants as did acknowledge such jurisdiction, and it was likewise recommended to the said states to refrain, in the mean time, from executing their laws over such inhabitants as did not acknowledge their respective jurisdictions.

From the whole tenor of these resolutions, it was evident that Congress wished for the present to pacify the parties, without coming to any decision upon the matter in dispute; and it was equally evident that she would prefer sacrificing Vermont as a separate jurisdiction, to a rupture at this time with either of the states, which laid claim to that territory. Nor shall we be surprised at this partial and evasive policy, when we consider that the successful termination of the war for independence, which was then undecided, and the fate of the colonies generally, depended upon the integrity of their union in the common cause.

These resolutions seem to have quieted all parties but Vermont. New Hampshire and New York complied with the recommendations, and authorized Congress to settle the dispute. Massachusetts did not comply, and she probably neglected it for the purpose of relieving Congress from the necessity of deciding the matter at the time appointed, and of preventing the sacrifice of Vermont. A compliance with these resolutions on the part of Vermont, would have been to admit the existence of four separate jurisdictions at the same time in the same territory, and in a territory too, the inhabitants of which had declared themselves to be free and independent, and had assumed the powers of government and exercised them in all cases and in every part of the territory. No alternative, therefore, remained to Vermont. She had taken a decisive stand—declared her independence—formed a constitution—enacted laws, and established courts of justice, and now noth-

* Williams' History, Vol. II. p. 187.

† Bladen's State Papers, p. 108. ‡ Ibid. p. 109.

* For these Resolutions see Bladen's State Papers page 110.

ing remained for her, but to go onward with firmness and resolution; and happy was it for her that she possessed statesmen endowed with courage and abilities suited to the exigency of her condition; statesmen who well understood the rights and interests of the community, and were determined that they should not be sacrificed by the neighboring states, or by the policy of Congress.

The foregoing resolutions of Congress had been communicated by express to the Legislature of Vermont, then in session at Manchester; and, on the 16th of October, Ethan Allen, Reuben Jones, N. Clark and Jonathan Fassett were appointed a committee to report a plan of "defence against the neighboring states, in consequence of the late acts of Congress." On the 19th, the General Assembly went into committee of the whole on the state of the country, and on the 21st made a report, which was unanimously adopted, in which they assert their right and determination to maintain the independence of Vermont, and recommend to the Assembly to make grants of the unappropriated lands of the state for the benefit of the same. On the next day, it was resolved that Ethan Allen, Jonas Fay, Paul Spooner, Stephen R. Bradley and Moses Robinson be appointed agents on behalf of the state, to attend the deliberations of Congress in February for the purpose of vindicating the independence of Vermont, and negotiating for her admission into the Union.*

On the 28th of October, Governor Chittenden, by direction of the Council and General Assembly, wrote to the president of the Council of Massachusetts, informing him that he had been made acquainted with the proceedings of Congress on the 24th of September, and that those proceedings contained the first intimation, which he had received, of the claims of that state over a part of Vermont. In this letter, which was forwarded by Gen. Ethan Allen, Gov. Chittenden vindicates the rights of the people of Vermont to liberty and independence, and expresses a determination, on his part, "to bring about an equitable accommodation of all differences, agreeable to the strict rules of justice and equity."†

On the 10th day of December, 1779, the governor and council of Vermont, in reference to the foregoing resolutions of Congress, published an appeal to the can-

did and impartial world,* in which they declared that 'they could not view themselves as holden, either in the sight of God, or man, to submit to the execution of a plan, which they had reason to believe was commenced by neighboring states; that the liberties and privileges of the state of Vermont, by said resolutions, are to be suspended upon the arbitrament and final determination of Congress, when, in their opinion, they were things too sacred ever to be arbitrated upon at all; and what they were bound to defend at every risk: that Congress had no right to intermeddle in the internal policy and government of Vermont;—that the state existed independent of any of the thirteen United States, and was not accountable to them, or to their representatives, for liberty, the gift of the benevolent Creator;—

That the state of Vermont was not represented in Congress, and could not submit to resolutions passed without their consent, or even knowledge, and which put every thing that was valuable to them at stake;—that there appeared a manifest inequality, not to say predetermination, that Congress should request of their constituents power to judge and determine in the cause, and never ask the consent of the thousands whose all was at stake. They also declared that they were, and ever had been, ready to bear their proportion of the burden and expense of the war with Great Britain from its commencement, whenever they were admitted into the union with the other states. But they were not so lost to all sense and honor, that, after four years of war with Great Britain, in which they had expended so much blood and treasure, they should now give up every thing worth fighting for,—the right of making their own laws, and choosing their own form of government,—to the arbitrament and determination of any man, or body of men, under heaven.'

Congress, as already noticed, had appointed the first day of February, 1780, for considering and determining the matters in question; but, contrary to the wishes and expectations of all the parties, the subject was not called up. Congress, however, ordered, on the 21st of March, that, as there were not nine states represented in that body, exclusive of the parties concerned, the matters should be, for the present, postponed, but on the 2d of June, resumed the consideration of it,

* For these proceedings see Slade's Vermont State Papers, page 113.

† For this Letter see Slade's Vt. State Papers page 114.

* This Appeal was written by the Hon. Stephen R. Bradley, and published in a pamphlet, a copy of which is in the possession of the Hon. Ira H. Allen, of Irasburgh.

AGENTS SENT TO CONGRESS.

and among other things, resolved "that the proceedings of the people on the New Hampshire grants, were highly unwarrantable and subversive of the peace and welfare of the United States, and that they be strictly required to abstain from all acts of authority, civil or military, over those inhabitants who profess allegiance to other states." The subject was again called up on the 9th of June, and the further consideration of it postponed to the second Tuesday of September following.*

The foregoing resolutions and proceedings of Congress were communicated to Governor Chittenden, who laid the same before his council; and on the 25th of July, they replied, in a communication addressed to the president of Congress, that "however Congress may view those resolutions, they are considered by the people of this state, as being in their nature subversive of the natural rights which they had to liberty and independence, as well as incompatible with the principles on which Congress grounded their own right to independence, and had a natural and direct tendency to endanger the liberties of America; that Vermont, being a free and independent state, had denied the authority of Congress to judge of their jurisdiction;—

That as they were not included in the thirteen United States, if necessitated to it, they were at liberty to offer or accept terms of cessation of hostilities with Great Britain, without the approbation of any other man, or body of men." And they further declared that if Congress and the neighboring states persisted in the course they were pursuing, they could have no motives to continue hostilities with Great Britain, and maintain an important frontier for the benefit of a country which treated them as slaves. Yet, notwithstanding the injustice done them, they were induced, by their attachment to the cause of liberty, once more to offer union with the United States, of which Congress were the legal representative body.†

All parties now anxiously awaited the decision of Congress on the second Tuesday of September, and, although Vermont denied the authority of Congress to determine the matter, she judged it prudent to employ Ira Allen and Stephen R. Bradley as her agents, to attend the deliberations upon the subject. On the 19th of September,‡ Congress took up the subject of the controversy, and the agents from Vermont were permitted to be present,

REMONSTRANCE OF THE AGENTS.

but not as the representatives of any state, or of a people invested with legislative authority. New Hampshire and New York now urged, and endeavored to prove, their respective claims to the disputed territory, and it soon became evident to the agents that Congress did not regard Vermont as a party in the controversy, but that, in attempting to decide the dispute between New Hampshire and New York, she was adjudicating upon the very existence of Vermont without her consent.

Alarmed and indignant at these proceedings, the agents withdrew their attendance, and on the 22d of September, transmitted a remonstrance* to Congress, in which they declare they can no longer sit as idle spectators, without betraying the trust reposed in them, and doing violence to their own feelings; that by the mode of trial which was adopted, the state of Vermont could have no hearing without denying her own existence, and that *they* would not take on themselves such humility and self abasement as to lose their political life in order to find it. They expressed the willingness of Vermont to submit the dispute to the mediation and settlement of the legislatures of disinterested states, but reprobated the idea that Congress could sit as a court of judicature, and determine the matter by virtue of authority given them by one only of the parties. They conclude by observing, that, if the present policy be pursued by Congress, they "are ready to appeal to God and the world to say who must be accountable for the awful consequences that may ensue."

On the 27th of September, Congress again resumed the subject of the controversy, and, having heard the evidence on the part of New Hampshire, resolved that the further consideration of the matter be postponed; and this was doubtless the wisest course of policy which Congress could pursue under existing circumstances. The contest with the mother country was yet undecided, and its issue doubtful, and the grounds which the several parties in the dispute had assumed were such, that Congress could not hope to make a decision which would satisfy them all; and to irritate either of the states concerned to such a degree as to drive them to an abandonment of the common cause, might paralyze the efforts of Congress, and prevent the attainment of that liberty and independence for which they were struggling.

* For these proceedings see Slade's State Papers, page 116.

† For this communication see Slade's State Papers, page 118. ‡ Ibid. page 122.

* For this remonstrance see Slade's State Papers, p. 124.

CONVENTIONS IN NEW HAMPSHIRE.

APPLICATION TO JOIN VERMONT.

SECTION V.

Union of Vermont with a part of New Hampshire and a part of New York in 1781.

The indefinite postponement of the decision of the controversy by Congress, as mentioned in the preceding section, was by no means agreeable to Vermont. She well knew the ground on which she stood, and although this postponement evinced that her claims to independence had made some impression on the mind of Congress, yet it forbade the hope of an immediate recognition of that independence, and her admission into the union. And, moreover, being irritated by the course pursued by New Hampshire and New York, in substantiating their claims, and being wounded by the humiliating treatment which her agents had received from Congress, Vermont now resolved upon a course of policy, which would enable her to assume a more imposing attitude, and induce her opponents to yield to power what had been so long denied to the claims of justice.

Since the dissolution of the union between Vermont and the sixteen towns from New Hampshire, a large number of the inhabitants in the western part of New Hampshire were still anxious to be annexed to Vermont. There were at the same time many who were desirous that New Hampshire should sustain her claim and exercise jurisdiction over the whole territory. To facilitate the accomplishment of the object last mentioned, a convention* of delegates from the several towns in Cheshire county, N. H., had assembled at Walpole on the 15th of November, 1780, and had sent an invitation to the towns on both sides of Connecticut river to appoint delegates to meet in convention at Charlestown on the 3d Tuesday of January following. Accordingly, representatives from forty-three towns assembled at Charlestown on the 16th of January, 1781; but, to the surprise and disappointment of those who had proposed the measure, a large majority of the convention were found to be opposed to the jurisdiction of New Hampshire and in favor of a union with Vermont.

A committee was therefore appointed by the convention to confer with Vermont on the subject of the union. This committee, on the 10th day of February, informed the assembly of Vermont, then sitting at Windsor, that "the convention of the New Hampshire towns, was de-

sirous of being united with Vermont, in one separate independent government, upon such principles as should be mutually thought the most equitable and beneficial." This application, together with another of similar import from the inhabitants of several towns in the north-eastern part of New York, was referred to a committee of the whole, which reported on the 14th of February.* In this report the committee, after recapitulating the history of the controversies with New Hampshire and New York, recommend that the legislature of Vermont should lay jurisdictional claim to all the lands situated east of Connecticut river, north of Massachusetts, west of Mason's line and south of latitude forty-five degrees," and also "to all the lands situated north of the north line of Massachusetts, and extending the same to Hudson river, the east of the deepest channel of said river to the head thereof; from thence east of a north line being extended to latitude 45°, and south of the same line including all the lands and waters to the place where this state now exercises jurisdiction; and that they do not exercise jurisdiction for the time being."

In addition to various other reasons for the recommendation above mentioned, the committee say, that notwithstanding the brave exertions of this state in the battles of Bennington and Hubbardton, Congress has been induced through the influence of the state claiming jurisdiction over its territory, not only to withdraw her troops, but all her articles and stores "even to pick-axes and spades, at a time when the state was erecting a new line of forts on her frontiers," thus compelling her to rely upon her own strength and resources for defence against a powerful enemy, and rendering it justifiable to increase her ability by enlarging the extent of her jurisdiction.

The report being accepted and its recommendations adopted by the assembly, a committee was appointed to confer with a committee of the convention of the New Hampshire towns, which was then sitting at Cornish, on the opposite side of the river, and after repeated communications between them, articles of union were finally agreed upon.† By these articles it was stipulated that the constitution of Vermont should be adopted by the New Hampshire towns; that application should be made to Congress to be admitted as one of the United States; that full act of

* For proceedings of this convention, see Slade's State Papers, page 126.

* For this Report, see Slade's State Papers, p. 126.

† For a detailed account of these articles and proceedings see Slade's State Papers, pages 127-128.

UNION WITH PART OF NEW HAMPSHIRE.

oblivion be passed for all former offences against Vermont by persons denying her jurisdiction; and that the towns in Vermont, and also the New Hampshire towns, should be called upon to express their opinions of the proposed union; and if, at the adjourned session of the assembly, in April next, it should appear that two thirds of each were in favor of the measure, the union should then be consummated, and representatives should be admitted to the assembly from the New Hampshire towns. These articles, agreed upon by the committees, were confirmed by the assembly, which pledged the faith of the state that they should be held sacred.

The assembly of Vermont met again at Windsor agreeably to adjournment, on the 4th of April, and the convention of the New Hampshire towns also re-assembled at Cornish. On the 5th of April, a committee of the convention informed the assembly that thirty-five towns on the east side of Connecticut river had consented to the union, being all the towns from which returns had been received; and that the way was now clear on their part for the union to take place. On examining the returns, which had been forwarded from the towns in Vermont, it appeared that thirty-six were in favor and seven opposed to the union; whereupon a committee was appointed to inform the convention that a major part of the towns in Vermont had agreed to the union, and that the assembly would receive the members returned from the New Hampshire towns, on the morrow, at nine o'clock in the morning. Accordingly, on the next day, thirty-five representatives from towns on the east side of Connecticut river, took their seats in the General Assembly of Vermont.*

On account of the unjustifiable measures by which New York was endeavoring to embarrass and overturn the government of Vermont, and in consequence of repeated solicitations from several towns in New York, which bordered on Vermont, to be taken into union with this state, the legislature of Vermont had, on the 14th of February, 1781, laid jurisdictional claim to all the lands west of her present territory, and east of Hudson river to the head thereof, and thence east of a north line extending to the 45th degree of north latitude; with the proviso, that this jurisdiction should not be exercised for the time being. But Vermont, having now completed her eastern union, once more turned her attention to that on

UNION WITH PART OF NEW YORK.

the west. On the 11th of April, 1781, a committee was appointed by the general assembly to attend a convention of delegates from the towns in New York which desired a union with Vermont, and make the necessary arrangement for effecting it. This convention met at Cambridge, and on the 15th of May, the articles of union were agreed to by the committee from Vermont and the delegates from twelve districts in New York; and on the 16th of June following, they were confirmed by the legislature of Vermont, and representatives from those districts were admitted to seats in the general assembly.*

By these bold and decisive measures, Vermont placed herself in an interesting attitude, and evinced to the world the abilities and the peculiar genius of her statesmen. Than the measures which we have just recorded, no course of policy could be better calculated to enable her to sustain her independence and thwart the designs of her enemies. By the unions, thus formed, she had doubled the extent of territory within her jurisdiction and added greatly to her numbers and resources. She had quieted the disaffection of her people at home, and restored confidence to her friends abroad. She had placed the territory in a condition to invite immigration from the neighboring states, and had laid the foundation for a large and powerful community. In short, she had placed herself in a condition to command the respect even of her enemies, and to draw from them concessions which justice alone had sought in vain. She therefore wisely determined, so to manage her own affairs, as to secure her own safety and independence, against the arms of the British on the north, and the wiles of her enemies in other quarters. The manner in which this was effected will be related in the following section.

SECTION VI.

Negotiations with the British in Canada from 1780, to 1783.†

From the commencement of hostilities at Lexington, no people in America had espoused the cause of liberty and of their country with greater alacrity, or sustained it with more spirit and resolution, than the people of Vermont. Yet, after all their efforts and sacrifices in the common cause, they had the mortification to find

* Slade's State Papers, p. 137.

* Slade's Vermont State Papers, p. 138—141.

† The fullest account of these negotiations is contained in Ira Allen's History of Vermont.

COL. ROBINSON'S LETTERS.

LETTERS FORWARDED TO CONGRESS.

themselves denied a just participation of the blessings which they had labored to secure. Their claims to independence were not acknowledged by Congress; the dismemberment of their territory and the annihilation of their sovereignty were threatened by the intrigues and the unjust claims of the neighboring states, and, to crown the whole, they were now abandoned by the power which ought to protect them, and left to contend single handed with the common enemy.

But notwithstanding their attachment to the cause of their country, the people of Vermont could not fail to perceive that every step which they took to support it, only rendered their own condition more hopeless. They could hardly wish to lend their aid for the purpose of bringing the struggle with a foreign enemy to a successful termination, when they perceived that, by such an event, they should be subjected to the domination of a more detestable enemy at home. In this state of things, Vermont wisely consulted her own safety; and by the negotiation with the enemy in Canada, in which she now engaged, she was so fortunate as to secure it.

The British generals in America had for some time entertained hopes of turning the disputes in relation to Vermont to their own account, by detaching that district from the American cause and making it a British province. But the first intimation of their views and wishes was communicated in a letter from Col. Beverly Robinson to Ethan Allen, dated New York, March 30th, 1780. In July, this letter was delivered to Allen in the street in Arlington, by a British soldier in the habit of an American farmer. Allen perused the letter, and then told the bearer that he should consider it, and that he might return.

Colonel Robinson began his letter by expressing a wish that his proposals might be received with the same good intention with which they were made. He then proceeds:—"I have often been informed that you and most of the inhabitants of Vermont, are opposed to the wild and chimerical scheme of the Americans in attempting to separate from Great Britain and establish an independent government of their own; and that you would willingly assist in uniting America to Great Britain, and in restoring that happy constitution so wantonly and unadvisedly destroyed. If I have been rightly informed, and these should be your sentiments and inclination, I beg that you will communicate to me without reserve, whatever proposals you would wish to make

to the commander-in-chief; and I hereby promise that I will faithfully lay them before him according to your directions, and flatter myself I can do it with as good effect as any person whatever. I can make no proposals to you until I know your sentiments; but think, upon your taking an active part and embodying the inhabitants of Vermont, under the crown of England, you may obtain a separate government under the king.—If you should think proper to send a friend here with proposals to the general, he shall be protected and allowed to return whenever he pleases."

Allen immediately communicated the contents of this letter to Governor Chittenden and some confidential friends, who agreed in opinion, that no answer should be returned. Robinson, not receiving a reply to his letter and supposing it to have miscarried, wrote again to Allen on the 2d of February, 1781, enclosing his former letter. In his second letter, after saying he had received new assurances of the inclination of Vermont to join the king's cause, he said that he could then write with more authority; and assured Allen that he and the people of Vermont could obtain the most favorable terms, provided they would take a decisive and active part in favor of Great Britain. He requested an answer; and, that the way might be pointed out for continuing the correspondence; and desired to be informed in what manner the people of Vermont could be most serviceable to the British cause.

Allen returned no answer to either of these letters; but, on the 9th of March, 1781, inclosed them in a letter to Congress, informing them of all the circumstances, which had thus far attended the business. He then proceeded to justify the conduct of Vermont in asserting her right to independence, and expressed his determinate resolution to do every thing in his power to establish it. Conscious of his own integrity, and sensible that his activity and sufferings in the cause of his country were well known throughout America, he expressed himself in the following independent and decided language.

"I am confident," said he, "that Congress will not dispute my sincere attachment to the cause of my country, though I do not hesitate to say, I am fully grounded in opinion, that Vermont has an indubitable right to agree on terms of a cessation of hostilities with Great Britain, provided the United States persist in rejecting her application for an union with them. For Vermont would be, of all peo-

FLAG OF TRUCE SENT INTO CANADA.

EXCHANGE OF PRISONERS.

ple, most miserable, were she obliged to defend the independence of the United claiming States, and they be, at the same time, at full liberty to overturn and ruin the independence of Vermont. When Congress consider the circumstances of this state, they will, I am persuaded, be more surprised that I have transmitted them the inclosed letters, than that I have kept them in custody so long; for I am as resolutely determined to defend the independence of Vermont, as Congress is that of the United States; and rather than fail, *I will retire with the hardy Green Mountain Boys into the desolate caverns of the mountains, and wage war with human nature at large.*"

Luring the spring of 1780, some of the scouting parties, belonging to Vermont, had been taken by the British and carried prisoners to Canada. On the application of their friends to Governor Chittenden, he, in the month of July, sent a flag, with a letter to the commanding officer in Canada, requesting their release or exchange. In the fall, the British came up lake Champlain in great force, and a very favorable answer was returned by Gen. Haldimand to Governor Chittenden's letter. A flag was at the same time sent to Ethan Allen, then a brigadier general and commanding officer in Vermont, proposing a cessation of hostilities with Vermont, during negotiations for the exchange of prisoners. This proposal was accepted by Allen, on condition that the adjacent frontier of New York should be included with Vermont. The British officer at first objected, but finally agreed to every thing which Allen proposed.

The governor appointed Colonel Ira Allen and Major Joseph Fay, commissioners on the part of Vermont, to negotiate the proposed exchange of prisoners; who, soon after, had an interview with Captain J. Sherwood and George Smith, agents on the part of the British. During this interview, the British agents availed themselves of the opportunity to explain their views, and to make proposals for the establishment of Vermont under the royal authority. The commissioners from Vermont received these proposals with some attention; and, although they avoided expressing a decided opinion on the subject, the British flattered themselves that they were in a fair way to effect their purposes.

The next year the British entered upon the business with high expectations of success; and as the British army in Canada was 10,000 strong, and the frontiers of Vermont without any adequate means of defence, it was evidently the interest of

Vermont not to deceive them, but to endeavor to effect that by policy, which they could not do by power. And as the cabinet council of Vermont believed, that the forces of the United States had been withdrawn from her territory, for the purpose of driving them to seek the protection of New York, they felt that it was clearly their duty, by managing the British attempts to corrupt them to their own advantage, to make the best provision remaining in their power, for the safety of the people.

In April, 1781, Col. Ira Allen was appointed to settle a cartel with the British for an exchange of prisoners. Taking with him one subaltern, two sergeants, and sixteen privates, he started, with a fair wind, on the 1st day of May, and soon arrived at Isle aux Noix, where he was politely received by Major Dundas, the British commander at that post. The cartel was soon agreed to, and the British agents, Sherwood and Smith, now entered upon the subject of the armistice and the establishment of the royal authority in Vermont with high hopes of accomplishing their object. Allen acknowledged that the people of Vermont were growing remiss in the prosecution of the war, being afraid that its termination in favor of America, would subject them to the government of New York, which they considered the most detestable in the known world; and that, to such an event, they would prefer to become a separate colony under the crown, and that the United States should be again brought under the dominion of the British government.

The British agents gave assurance on their part, that Vermont could become a royal colony with privileges equal to those enjoyed by any other colony; and that they who assisted in accomplishing such an object, would be suitably honored and rewarded. With such consummate skill, did Allen manage this negotiation on the part of Vermont, that without committing himself, he completely effected his own views; and by leading the British agents to an agreement that hostilities should not be commenced against Vermont till after the next session of the assembly, he succeeded in keeping an army of 10,000 of the enemy inactive upon the frontiers.* This business was accomplished after a conference of 17 days, and the commissioners parted in high friendship; Allen and his suite being furnished by Major Dundas with ample stores for their return

* The militia of Vermont did not at this time exceed 7000 men.—Allen's History.

COL. IRA ALLEN SENT TO CANADA.

HIS REPORT TO THE LEGISLATURE.

home. On his way, Allen encouraged the settlers, who were abandoning the country, to remain peaceably upon their farms, and trust to the governor and council to provide the means for their defence; and he assured them, that, if a removal became necessary for the safety of their families, they should have timely notice, and assistance in accomplishing it.

It was generally known that Col. Ira Allen had been sent to the enemy in Canada under a commission from the Governor of Vermont, but the precise object and extent of the negotiations, were at this time known only to eight individuals, viz. Thomas Chittenden, Moses Robinson, Samuel Safford, Ethan Allen, Ira Allen, Timothy Brownson, John Fassett and Joseph Fay. When it was understood that Colonel Allen was to report the result of his mission at the meeting of the legislature at Bennington, in June, curiosity and a desire to know the true state of affairs, drew together a large number of spectators from Vermont, the neighboring states, and Canada. The whigs in Vermont and the adjoining states were jealous that the views of the cabinet council of Vermont extended to something farther than an exchange of prisoners; they therefore sent their agents to watch the legislature and to discover whether this intercourse tended to any thing treasonable on the part of Vermont, or injurious to the American cause. While, on the other hand, emissaries were sent from Canada to see whether Col. Allen reported any thing contrary to the views interchanged between him and the British agents at the Isle aux Noix, with regard to the establishment of Vermont as a British province.

A few days after the commencement of the session, the two houses met in joint committee on the subject of Col. Allen's mission to Canada. Governor Chittenden arose and stated, that Colonel Allen had been sent to Canada to obtain the release, or exchange, of sundry persons belonging to this state, who were prisoners in the hands of the enemy, and that, with much difficulty, he had completed the business in behalf of Vermont, though no such exchange had taken place with the United States, nor with any other individual state. He then informed the committee that Col. Allen was then present, and that, if further information was wanted, he could best give it. Col. Allen then arose, and, after recapitulating substantially what the governor had stated, informed the committee that his commission and papers had been left at home, but that they should be submitted to their inspection the next

day. Accordingly, on the next day, he attended with the papers, which, after a short verbal explanation, were read. From these it appeared that the British had shown great generosity in the exchange of prisoners, but they contained nothing respecting an armistice, or the establishment of a royal government in Vermont; the negotiations on the two latter subjects having been purposely conducted on the part of Vermont by means of verbal correspondence. Colonel Allen then rose and stated, that if any member of the committee, or auditor among the spectators, wished any further information respecting the business, he was ready to answer their questions. All seemed satisfied. The friends of the United States complimented Allen for his open and candid conduct, and the spectators from Canada returned fully satisfied that nothing had transpired inconsistent with their views and designs.

At this session of the legislature Major Joseph Fay was appointed "commissioner of prisoners," and in July, he went on board the Royal George on lake Champlain, and obtained the exchange and a further extension of the armistice. About this time a correspondence was carried on between Ethan and Ira Allen on the one part and the British on the other, by means of a British guard of a sergeant and eight men. This guard conveyed the communications from the British officers to Sunderland, where they were received by one of the Allens personally in the dusk of the evening, who, the next evening, returned an answer, which was conveyed by them to lake Champlain. And it is worthy of remark, that communications were frequently interchanged in this manner, during the years 1781 and 1782, without discovery, notwithstanding Sunderland was more than sixty miles from the frontier.

While this friendly intercourse was thus maintained between the British and a few of the leading men in Vermont, the people generally were very inveterate in their hatred towards the British and Tories. A person in Arlington, being supposed to entertain friendly feelings towards the British, a party collected in Manchester and were proceeding to tear down his house. In Sunderland they were met by the Messrs. Brownsons and Ira Allen, who, with much difficulty, persuaded them to return. That very night Colonel Allen received a packet from a British guard upon the same ground where this party were persuaded to go back, and returned an answer the next evening.

Jonas Fay, Bezaleel Woodward and Ira

LORD GERMAIN'S LETTER.

ARRANGEMENT WITH THE BRITISH.

Allen were appointed agents to Congress by the legislature at their session in June. About the time of their arrival at Philadelphia, a letter from Lord Germain to Sir Henry Clinton, commander of the British forces in America, and which had been intercepted by the French, was published in the *Pennsylvania Packet*. It was dated Whitehall, February 7th, 1781, and among other things contained the following paragraph: "The return of the people of Vermont to their allegiance, is an event of the utmost importance to the king's affairs; and at this time, if the French and Washington really meditate an irruption into Canada, may be considered as opposing an insurmountable bar to the attempt. General Haldimand, who has the same instructions with you, to draw over those people and give them support, will, I doubt not, push up a body of troops to act in conjunction with them, and secure all the avenues through their country into Canada; and, when the season admits, take possession of the upper parts of the Hudson and Connecticut rivers, and cut off the communication between Albany and the Mohawk country. How far they may be able to extend themselves southward, or eastward, must depend on their numbers and the disposition of the inhabitants."

The information contained in this letter was calculated to confirm the suspicions which the friends of American liberty had entertained with regard to the negotiations between Vermont and the British, and did more towards disposing Congress to recognize the independence of Vermont and to gain her admission into the union, than all her sacrifices and services in maintaining the war. This letter also shows that not only the British generals in America were deceiving themselves with the idea that Vermont was about to return to her allegiance to the king, but that the British ministry were also deceived, and supposed that the people of Vermont were generally desirous that their state should be made a British province, when perhaps not more than a dozen individuals within the state had ever thought or spoken of such an event; and these had only countenanced the idea of it, when urged to such a measure by the British agents, and then only for the purpose of keeping the northern British army inactive upon their frontiers, and affording the people protection by their management, when they could not do it by force.

In September, 1781, Colonel Allen and Major Fay had another interview with the British agents, at which a plan of government for the colony of Vermont was

discussed and agreed upon by the parties. It was to consist of a governor, appointed by the king, but who should be a citizen of Vermont; a lieutenant governor and 12 councillors, who should be chosen by the people; and a house of representatives, the members to be chosen by the respective towns. The British agents then insisted that Vermont should immediately declare herself a British province. The Vermont commissioners represented that matters were not yet sufficiently matured for such a declaration—that the inhabitants in some parts of the territory were not yet sufficiently brought over to the British interest, and, until that was effected, and means provided for the purpose, it would be extremely difficult to defend their extensive frontiers against the United States.

The British agents yielded this point with reluctance; but suggested another proposition, which they said must be complied with, or the armistice must be ended, which was, that a proclamation should be issued by the British general in October, during the session of the Vermont legislature, declaring Vermont a colony under the crown, and confirming the plan of government which they had agreed upon; and that the legislature of Vermont must accept the same, and take suitable measures for carrying it into effect. After some farther discussion, the Vermont commissioners judged it better to accede to this unpleasant proposition, than that the armistice should be discontinued in the present defenceless state of the frontiers; after which, the commissioners and agents separated on friendly terms.

The legislature of Vermont met at Charlestown early in October, and about the same time General St. Leger ascended lake Champlain with a powerful British army, and landed at Ticonderoga. The Vermont troops were then at Castleton, under the command of General Enos. General Enos and Colonels Fletcher and Walbridge were now well acquainted with the negotiation with the British, but the army and the inhabitants of the country knew nothing of it; and hence it was necessary to keep up appearances, by frequently sending out scouts to observe the movements of the enemy. One of these scouts, commanded by Sergeant Tupper, fell in with a party of the British, and some shots were exchanged. Tupper was killed on the spot, and his men retreated! General St. Leger ordered Tupper's body to be decently buried, and sent his clothing, with an open letter to Gen. Enos, in which he expressed his regret for the death of the sergeant. This com-

DEATH OF SERGEANT TUPPER.

munication and the apparel were publicly delivered to General Enos, and were the occasion of much murmuring among the troops.

Letters were immediately written by General Enos and Colonels Fletcher and Walbridge, and forwarded by express to Governor Chittenden at Charlestown. The bearer, Mr. Hathaway, not being in the secret of the negotiation with the British, proclaimed the extraordinary message of General St. Leger in the streets of Charlestown, in consequence of which the people followed him in crowds to the governor's apartment to hear the news. In the room with the governor were several persons, some of whom were in the secret, and some who were eager after information that they might make an ill use of it. On opening the letters, they were found, besides announcing the arrival of Gen. St. Leger, to contain information respecting the negotiation which it was not deemed prudent to make public.

While these letters were passing round among those who were in the secret, Maj. Runnels entered the room and demanded of Colonel Ira Allen why Gen. St. Leger should be sorry Tupper was killed. Allen said he could not tell. Runnels repeated the question; and Allen replied that good men were sorry when good men were killed, which might be the case with St. Leger. This answer enraged Runnels, and he again loudly demanded what reasons could possibly induce a British general to be sorry when his enemy was killed, and to send his clothes to the widow. Colonel Allen then requested Major Runnels to go to his regiment, and, at the head of that, demand of St. Leger the reasons of his sorrows; and not stay there, asking impertinent questions and eating up the country's provisions, when the frontiers were invaded. Some high words followed between them, which called the attention of those present from the letters, and Runnels soon after left the room.

The governor then convened the board of war, all of whom were in the secret, and Hathaway was left to detail the news to the populace. New letters were then made out from those received, in which every thing relating to the negotiation and armistice was suppressed. These were substituted for the originals, and were publicly read before the council and assembly for the satisfaction of the people. In the mean time Col. Allen and Major Fay wrote to the British agents that matters were going on favorably to their designs, but as a report prevailed that Cornwallis and his army had surrendered to

EFFECT OF CORNWALLIS' SURRENDER.

the Americans, which was doubtless unfounded, they thought it inexpedient to publish the proposed proclamation till more favorable news should remove all doubts with regard to the ability of the British to sustain Vermont in the measures which she should adopt.

About an hour after this communication was delivered at Ticonderoga, an express arrived there from the south, with the news of the capture of Cornwallis and his whole army, and before night the British embarked all their troops and stores, and returned to Canada. Thus were the negotiators in Vermont relieved from their embarrassment and danger, which would have been much increased by the publication of the proposed proclamation; and thus was terminated the campaign of 1781, in which a few sagacious and daring individuals, secured, by their negotiations and management, the extensive frontier of Vermont, which was exposed to an army of ten thousand of the enemy.

In the winter of 1782, the British in Canada were extremely anxious to ascertain how the people of Vermont were affected by the capture of Cornwallis. Their agents wrote, on the 28th of February, and again on the 22d of April, in the most pressing terms for information, and stating that the commander-in-chief had full powers to confirm every article which had been agreed upon at a former interview for the establishment of Vermont as a royal government. Impatient at not receiving an answer, they wrote again on the 30th of April, making new offers and promises, and designating several individuals in Vermont for whom his excellency was authorized and disposed to provide in the distribution of the royal favors, and in several cases assured them what commissions they should receive.*

In July, Colonel Ira Allen was again sent to Canada with a letter from Governor Chittenden to General Haldimand, requesting the release of two officers, belonging to Vermont, who were then prisoners in the hands of the British. The British agents thought this a favorable opportunity for bringing the negotiations with Vermont to a decision, and used every art to persuade Vermont immediately to declare herself a British province. Allen employed every argument to justify Vermont for delaying it, and to prevent the renewal of hostilities. Haldimand was finally prevailed upon to continue the armistice, and to liberate the prisoners above mentioned. He then wrote to Governor Chittenden, announcing his pacific

* See Glade's State Papers, p. 156.

TERMINATION OF THE WAR.

VINDICATION OF VERMONT.

disposition towards Vermont in the most unequivocal terms, and requesting the people of Vermont, without apprehension, to encourage and promote the settlement and cultivation of the country for the interest and happiness of themselves and their posterity.

With this year terminated the war of the revolution, leaving favorable impressions on the minds of the British towards Vermont. Of the beneficial effects of the policy pursued, to Vermont and to the union, there can be no doubt, but of the propriety of this course there may be some question. On the part of the British, the negotiation consisted in repeated endeavors to persuade the leading men in Vermont to abandon the American cause and declare the state a British province. To these, the leaders in Vermont returned evasive and ambiguous answers, calculated, indeed, to keep alive the hopes of the British, but not intended to pledge the government of Vermont. The leading men in Vermont were known to be as firm friends of American independence, as any individuals on the continent; but, abandoned as Vermont was by Congress, and exposed to the overwhelming force of the enemy, no other means of security remained but that artful policy, which we have just described; and which kept a powerful British army inactive on the northern frontier of the union during three successive campaigns.*

* It has been asserted, and has perhaps to some extent been believed, that a number of the leading men in Vermont, had, for several years previous to the settlement of the controversy with New York, been dissatisfied with the principles of American liberty, and were desirous of coming again under the dominion of Great Britain; and there have been writers in a certain quarter, who have been ready to lead their aid in keeping such an opinion afloat. Of this class is the recent Biographer of the Indian chieftain, Brant. He has taken much pains to travel out of his way in order to meddle with the characters of those men, who were formerly so great a terror and annoyance to the New York land speculators, and has artfully endeavored to revive, and leave upon the minds of his readers, an impression unfavorable to their reputation for patriotism; thus misrepresenting some of the most indomitable enemies of oppression and tyranny and the most ardent and active friends of rational liberty, which this, or any other country has produced. But it is utterly impossible that any unprejudiced person, who is acquainted with the character of these men, and with our early history, should for a single moment doubt their patriotism, or entertain the thought that either Ethan or Ira Allen, or Thomas Chittenden, or either of the Fays or Robinsons, or indeed any of the leading men in Vermont, previous to her admission into the Union, ever seriously contemplated a return to their allegiance to Great Britain. As a choice of two evils, there is no doubt that they would sooner have submitted to Great Britain than to New York, and this they openly declared, because they regarded the latter as the greater tyrant, and a tyrant in America, where the principles of liberty were so generally diffused, was to them as hateful and even more detestable, than a tyrant in Europe.

SECTION VII.

Indian depredations upon the settlements in Vermont.

Having now completed our account of the civil policy of Vermont during the war for independence, excepting such parts as relate particularly to the admission of Vermont into the federal union, and which are referred to the next chapter, we shall here give a brief account of the depredations of the Indians upon our settlements, and notice some other things which have been omitted in the preceding narrative. Previous to the conquest of Canada, in 1760, the French and English nations were engaged in almost perpetual war, and in these wars their colonies and

But it is perfectly obvious that they had no idea of submitting to either, and that their negotiations with the British authorities in Canada, were undertaken for the express purpose of preventing the occurrence of such a disaster, and whether correct or not, they always justified themselves in these proceedings, on the ground of self-preservation. That these negotiations served, not only to protect Vermont, but the United States, from invasion by a powerful British army for a period of about three years, is undoubted; and it is, perhaps, equally certain that, by concealing the true object of these negotiations from the people of the United States, New York was prevented from pressing her claims at that period to the territory of Vermont, and Congress from lending its aid to enforce those claims, lest they should promote, what they already feared might be, a growing disaffection to the American cause, and thus hasten the event, which these transactions had led them to fear, namely, the return of Vermont to her allegiance to Great Britain.

The continuance of the correspondence and negotiations between the leading men in Vermont and the British authorities, after the close of the war, has been adduced as proof that Vermont was desirous of becoming a British province. That such a correspondence was kept up till near the time of the admission of Vermont into the Union, there can be little doubt; nor is it less doubtful that the leading men in Vermont were very willing that the British authorities should deceive themselves with the expectation that Vermont might yet become a British province, while they themselves entertained no such thought, except as a dernier resort to save themselves from the clutches of New York.

When the treaty of peace had relieved the United States from her foreign enemies, it was seriously apprehended that her arms might be employed in enforcing the claims of New York to the territory of Vermont. In that case Vermont resolved to spare no efforts for an effectual resistance, and she felt it to be of the utmost importance to her to secure the friendship of the British authorities in Canada, that through their connivance, arms and other supplies might be obtained through the merchants of Montreal and Quebec. This correspondence was, therefore, only a continuance of that game which had been so successfully played during the last three years of the war, and it was usually spoken of, by the persons engaged in it in Vermont, as the *Haldimand* policy. This correspondence, however, embraced other objects, one of which was the construction of a canal along the Richelieu from lake Champlain to the St. Lawrence, which should open a water communication between Vermont and the ocean, over which neither New York nor the United States could have any control.

BRIDGEMAN'S FORT.

CAPT. MELVIN.

MILITARY ROAD.

Indian allies were always involved. During their continuance, the frontier English settlements were frequently broken up, and the inhabitants either massacred or carried into captivity. Some account of these transactions in the vicinity of Vermont has already been given in the first chapter. But as very few settlements were made within our limits while Canada was in possession of the French, the first settlers of Vermont suffered less from the incursions of the Indians than those of some of the other states.



*Bridgeman's Fort.**

We have already mentioned that the inhabitants of Vernon were attacked and several of them slain by the Indians, in 1746, and that Bridgeman's fort was taken and destroyed by them the next year. This place again received a hostile visit in 1755. On the 27th of July, of this year, Caleb Howe, Hiskiah Grout, and Benjamin Gaffield were way-laid and fired upon by a party of Indians, as they were returning from their labor in the field. Howe was killed, Gaffield was drowned in attempting to ford the river, and Grout escaped unhurt. The Indians then proceeded to Bridgeman's fort, which had been rebuilt, where they made prisoners of the families of these three men, consisting of their wives and eleven children, being all the persons in the fort. These were all carried to Canada, where they were doomed to suffer a long and cruel

captivity. Most of them, however, were afterwards redeemed and returned to their friends.

In 1756, as Captain Melvin, at the head of about 20 men, was marching through the wilderness from Charlestown, New Hampshire, to Hoosic fort, and when in the southerly part of Newfane, which was then uninhabited, he was fired upon by a large party of Indians, who were lying in ambush. A severe conflict ensued, in which both parties suffered considerably in killed and wounded. Melvin's party was at length overpowered by numbers, and was obliged to leave the field in possession of the enemy. Melvin and several of his number made their escape and arrived safely at fort Dummer. The next day he returned to the battle ground with a party from fort Dummer. The Indians were not to be found, but the bodies of those who were slain were collected and buried.

At the time of the American Revolution the number of Indians residing in the vicinity of Vermont was greatly diminished; and as the Americans, at the commencement of that struggle, got possession of the military posts along lake Champlain, these few had, for a while, no opportunity to molest our settlements. But when the American army retreated from Canada in 1776, and the British had secured to themselves the command of lake Champlain, our western borders were wholly at the mercy of the enemy, and continued so during the remainder of the war. All the settlements in the vicinity of the lake were broken up, and the settlers retired with their families to the southward. The frontier military posts were at Castleton and Pittsford, on the west side of the mountains, and at Barnard, Corinth, Newbury, and Peacham, on the east side.

During the last French war, a military road had been opened from Charlestown to Crown Point, which was now very beneficial to the Americans, and early in the spring of 1776, General Bailey was ordered to open a road from Newbury, through the wilderness, to St. John, for the purpose of facilitating the conveyance of troops and provisions into Canada. He had opened the road six miles above Peacham, when the news arrived that our army had retreated from Canada, and the undertaking was abandoned. But in 1779, Gen. Hazen was ordered to Peacham with part of a regiment, for the purpose, as was said, of completing the road begun by Bailey, so that an army might be sent through, for the reduction of Canada. But this was probably only a feint for dividing the enemy and preventing

* This fort is now standing in Vernon. This fort and others so often mentioned in the accounts of the Indian wars, were properly block-houses. They were constructed of large squared timber lashed together at the corners in the manner of a common log cabin, and covered with a roof, with port-holes for firing upon the assailants. They served only as protection against musketry.

EXPEDITION AGAINST NEWBURY.

them from sending their whole force up the lake. Hazen, however, continued the road 50 miles above Peacham, through the towns of Cabot, Walden, Hardwick, Greensborough, Craftsbury, Albany, and Lowell, and erected block houses at several places along the route. This was a great convenience to the settlers who came into these parts after the war, and is known at this day as the "*Hazen Road*." It terminated near a remarkable notch in the mountain in Westfield, and which has since been called *Hazen's Notch*.

During the continuance of the war, the frontier towns were frequently alarmed by the appearance of Indian scouting parties in their neighborhood, but the inhabitants were seldom molested. Their dwellings were, however, occasionally plundered, and sometimes men were taken prisoners, and a few, at different times, were killed, but the women and children were not usually injured, and never massacred as in former wars. In 1777, the Indians killed two men in Brandon, took several of the inhabitants prisoners, and burnt their dwellings. On the 9th of August, 1780, they took three men in Barnard, whom they carried to Canada;* and in October of the same year, they made a successful expedition against Royalton, a thriving settlement on White river, which then consisted of about 300 inhabitants.

This expedition was designed against Newbury, on Connecticut river, for the object, as was supposed, of capturing a Lieutenant Whitcomb, who in July, 1776, while on a scout, had wantonly shot General Gordon, a British officer, between Chambly and St. Johns, and robbed him of his watch and sword. The British deeply resented this attack as unworthy of an officer, and were desirous of getting Whitcomb into their power. The party, consisting of about 300 men, mostly Indians, was commanded by one Horton, a British lieutenant. While proceeding up Winooski river, they fell in with several hunters, by whom they were told that the people of Newbury were expecting an attack, and were well prepared for defence. This information induced them to turn their attention towards Royalton.

They accordingly proceeded up Stevens' and jail branch, and down the first branch of White river, to Tunbridge, where they lay in their encampment during the Sabbath, and on Monday morning, it being the 16th of October, they com-

BURNING OF ROYALTON.

menced their depredations at the house of Mr. John Hutchinson, who lived near the line between Tunbridge and Royalton. After making Mr. Hutchinson and his brother Abijah prisoners, they proceeded to the house of Mr. Robert Havens, where they killed Thomas Pember and Elias Button. They then went to the house of Joseph Kneeland, took him and his father, and Simeon Belknap, Giles Gibbs and Jonathan Brown. Proceeding thence to the house of Mr. Elias Curtis, they made him and John Kent and Peter Mason prisoners.

Thus far the business was conducted with the greatest silence, and the prisoners were forbid making any outcry upon pain of death. They at length arrived at the mouth of the branch, where they made a stand, while small parties proceeded in different directions to plunder the dwellings and bring in prisoners. By this time the alarm had become general, the inhabitants were flying for safety in every direction, and the savages filled the air with their horrid yells. One party extended its ravages down the river into Sharon, took two prisoners and burnt several houses and barns. Another party proceeded up the river, made prisoner of David Waller, a young lad who lived with General Stevens, plundered and set fire to the General's house, and advanced in that direction about three miles, killing the cattle and plundering and setting fire to the buildings as they passed.

After completing their work of destruction, they returned with their booty to the place where they commenced their attack in the morning. From this place they proceeded across the hill to Randolph, where they encamped for the night on the second branch of White river. In the course of the day they had killed two persons, taken 25 prisoners, burnt upwards of 20 houses, and about the same number of barns, and killed about 150 head of cattle, and all the sheep and hogs that fell in their way; having suffered no loss themselves, and scarcely met with any opposition. Surprised, affrighted and scattered from one another, the inhabitants could take no steps for their defence; the alarm, however, soon spread, and a number of men immediately marched from Connecticut river, and the adjacent towns. By evening they amounted to several hundreds, and were collected at the place where the attack was first commenced. Here they organized themselves, and chose for their commander a captain John House, who had served several campaigns in the continental army.

Early in the evening, House began his

* Some further account of these, and other similar transactions, will be found in part third, in the accounts of Barnard, Brandon, Bridport, and other towns.

PURSUIT OF THE INDIANS.

INTERESTING INCIDENTS.

march with this undisciplined but brave corps, in pursuit of the savages, who were at this time encamped seven or eight miles ahead. The night was dark and he was guided amidst the logs, rocks and hills with which the wilderness abounded only by a few marked trees. When they supposed themselves near the Indians, they proceeded with caution, but as they were passing over a stream which was crossed upon a large log they were fired upon by the enemy's rear guard, which had been posted behind some trees near the place, and one man was wounded. House's party returned the fire, killed one Indian and wounded two others. The guard then retreated to the Indian camp, and House advanced within about 300 yards of the same, where he waited till day light without commencing an attack.

Fatigued by the business of the preceding day, and now suddenly awakened from profound sleep, the savages were at first filled with consternation and thrown into the utmost disorder. They, however, soon recovered from their fright, and were not long in concerting measures for their own safety. They sent out an aged prisoner to inform the Americans that, if they proceeded to make an attack, they should immediately put all the prisoners to death. The proceedings thus far had caused two to be put to death; one to retaliate the death of the Indian, who had been slain, and the other for refusing to march, in the expectation that the Americans would relieve them. These were tomahawked as they lay bound upon the ground. Having placed their warriors in the rear to cover their retreat, they silently left their encampment, proceeded to Randolph, where they took one prisoner, passed through the west part of Brookfield, and, by the way of Winooski river and lake Champlain, to Montreal.

House and his men were waiting for the dawn of day and deliberating upon the message brought them by the prisoner, till the Indians had departed and were far beyond their reach. They, however, followed upon their trail as far as Brookfield and then returned, having lost the opportunity of attacking the enemy by their caution and delay. On their way to Canada, the prisoners were well treated, and with respect to provisions fared as well as their masters. Of the twenty-six who were carried away, one died in captivity, and the rest were liberated the next summer and returned to their friends.

During the attack upon Royalton, there were several occurrences which are worthy of notice. In one of the houses first attacked, two women, being suddenly

awakened by the rushing in of the savages, were so much frightened that they lost the use of their reason, went out of their doors naked, and stood motionless till the Indians brought them their clothes. This act of kindness restored their senses; they put on their clothes, collected the children and fled to the woods, while the savages were engaged in plundering the house. At another place one of the women had the boldness to reproach the Indians for distressing helpless women and children, telling them that if they had the spirit and souls of warriors, they would cross the river and go and fight the men at the fort. The Indians bore her remarks patiently, and only replied, *squaw shouldn't say too much*. At another place a woman having her gown carried out of the house with other plunder, resolved to recover it. Seeing it in a heap of pillage which the savages were dividing among themselves at the door, she seized it; upon which one of the Indians clubbed his gun and knocked her down. Not discouraged, she patiently awaited an opportunity when the savages were collecting more plunder, seized and brought off her gown, having at the same time one child in her arms and leading another by the hand. Another woman having her young son taken away with other little boys, followed the Indians with her other children, and entreated them to give him up, which they did. Encouraged by this success, she then interceded for others, and finally prevailed upon them to give up 12 or 15 of her neighbor's children. One of the Indians then in a fit of good humor offered to carry her over the river upon his back. She accepted his proposal, and her savage gallant carried her safely over, though the water was up to his middle, and she soon returned with her little band of boys, to the no small surprise and joy of their parents.

A few days after the burning of Royalton there was one of the most extensive alarms in the county of Windham, experienced in Vermont during the war; but it proved to be wholly groundless. It happened, that as several men were surveying lands in Brookline, some of them undertook to imitate the Indian war-whoop. In this they succeeded to admiration, and were heard by the inhabitants of Athens, who, supposing them to be real Indians, took fright, fled, and rapidly spread the alarm through the neighboring towns. Immediately all was terror and confusion. To their bewildered imaginations every noise became the yell of the savage, and every rock and every tree of the forest a lurking place for the cruel

ALARM IN WINDHAM COUNTY.

DELEGATES SENT TO CONGRESS.

foe. With such precipitation did they flee from their farms and dwellings that the men left their teams harnessed in the field, and women their ovens heating and victuals cooking by the fire.

When the intelligence reached Colonel Sargeant at Brattleborough, he sent out orders into the different towns requesting their militia to assemble for the purpose of stopping the progress of the Indians who were laying waste the settlements. A snow storm had commenced, and before night was so severe as to render the flight of the inhabitants laborious and distressing; and, as evening came on, numerous lights were seen along the horizon, which, it was not doubted, proceeded from the conflagration of the dwellings of the inhabitants wantonly plundered and set on fire by the Indians. This alarm spread over most of the country, but was happily of short continuance. The brave soldiery marched into the deserted country, but they found nothing but a deep snow to interrupt their progress. The original cause of alarm was soon ascertained, and the lights, by which it had been heightened, were found to proceed from the

burning log and brush heaps, which had been piled by the industrious inhabitants of Newfane, and which had been set on fire as they saw the storm approaching.

On the 8th of March, 1781, a party of British and Indians made prisoners of Colonel Johnson, Jacob Page, and Jonathan Elkins, and carried them to Canada. In the following summer, a scout consisting of four men from Peacham, while proceeding up Hazen's Road, were fired upon by a party of Indians. Two of them were killed and scalped, and the other two made prisoners. In 1782, a party of British and Indians, after killing one man and taking one prisoner at Newbury, proceeded to Corinth where they compelled the inhabitants to swear allegiance to the British king. Other towns were also visited by small parties of the enemy in the course of the war, but during the period of the negotiation, mentioned in the last section, and while Vermont was wholly at their mercy, these parties did very little injury, and probably had orders from the British generals not to molest the inhabitants.

CHAPTER V.

THE ADMISSION OF VERMONT INTO THE UNION.

SECTION I.

Extending from the completion of the eastern and western unions with Vermont on the 22d of June, 1781, to the dissolution of the same on the 22d day of February, 1782.

Vermont, having completed her eastern and western unions, as related in the preceding chapter, appointed Jonas Fay, Ira Allen, and Bezaleel Woodward, delegates to the American Congress to negotiate for her admission into the federal union. Full powers were given them to complete the arrangement; and, if they effected their object, they were authorized to take their seats in Congress as the representatives of Vermont. These delegates arrived at Philadelphia in the beginning of August, and about the time of the publication of Lord Germain's letter, as already mentioned. On the 7th of August, 1781, Congress took up the subject of

their mission, and appointed a committee of five persons to confer with the delegates from Vermont, and agree with them upon the terms of admission, provided Congress should see fit to recognize Vermont as an independent state.

On the 18th of August, a conference took place between this committee and the delegates from Vermont, at which sundry questions were proposed to the latter respecting the extent, population, and resources of Vermont, and the views and wishes of the inhabitants; to all of which answers were returned.* On the 20th, the committee made their report to Congress; whereupon that body adopted the following resolution: "*Resolved*, That it be an indispensable preliminary to the recognition of the independence of the people inhabiting the territory called Vermont, and their admission into the federal

* For an account of this conference see Slade's State Papers, page 158.

union, that they explicitly relinquish all demands of lands or jurisdiction on the east side of the west bank of Connecticut river, and on the west side of a line beginning at the north west corner of Massachusetts, thence running twenty miles east of Hudson river, so far as said river continues north-easterly in its general course, then by the west bounds of the townships granted by the late government of New Hampshire, to the river running into East Bay, thence along said river and bay to lake Champlain, thence along the waters of said lake to latitude 45 degrees north."

Vermont and New York were both dissatisfied with this resolution—Vermont, because it required as a condition of her admission into the union, that she should dissolve the agreeable connexions which she had just formed—New York, because it recognized the claim, against which she had so long and so earnestly contended;—the one, because it bereft Vermont of one half her present territory, resources and importance—the other, because it would allow Vermont still to have something left which she could call her own. This appears from the proceedings of their respective legislatures.

The legislature of Vermont met at Charlestown, on the east side of the Connecticut river, in October, and on the 16th of that month, the foregoing resolutions were laid before them. The resolution held out to Vermont a faint prospect of an admission into the federal union with her original territory, but having lost much of her confidence in the assurances of Congress, and having now consolidated her unions at home, she felt herself in a condition to demand better terms than the relinquishment of one half her territory and population, to secure the independence of the other half. After deliberating and debating upon the subject for several days, the assembly, on the 19th of October, voted that they could not comply with the foregoing resolution of Congress.*

They declared that a compliance would destroy the foundation of the harmony which then subsisted in the state, and be a violation of the solemn compact entered into by the articles of union and confederation—that they would remain firm in the principles on which they had assumed the powers of government—that they would hold inviolate the articles of union which connected the parts of the state together—and that they would submit the question of their independence to the ar-

bitration of no power under heaven. They however declared their willingness to submit any questions, which might arise, with regard to jurisdictional limits between them and the neighboring states, to arbitrators mutually chosen; and, when admitted into the American union, they would not object to submitting such disputes to Congress.

The Legislature of New York, on the other hand, regarding the resolution of Congress as a virtual determination of the controversy between that state and Vermont, passed a number of resolutions, and a solemn protest against the proceedings of Congress.* Having stated their claims, and some former proceedings of Congress on the subject, they went on to express their disapprobation and alarm at the evident intention of Congress, from *political expedience*, to establish an *arbitrary* boundary, which excluded from that state a great part of its territory. They declared that, in the opinion of the legislature, Congress had no authority, by the articles of confederation, to intermeddle with the territorial extent, or jurisdiction, of either of the United States, except in case of dispute between two or more states in the union,—that to carry into execution said resolution of Congress, would be an assumption of power, and an infraction of the articles of confederation, and that they therefore solemnly protested against the same.

With the resolution of Congress of August 20th, a verbal message had been sent by General Washington to Governor Chittenden, desiring to know what were the real designs, wishes and intentions of the people of Vermont;—whether they would be satisfied with the independence proposed in said resolution, or seriously thought of joining the enemy and becoming a British province. On the 14th of November, Governor Chittenden returned an unequivocal and decisive answer to the above communication, in which he said that no people on the continent were more attached to the cause of America than the people of Vermont; but, that they would sooner join the British in Canada, than submit to the government of New York—that, driven to desperation by the injustice of those who should have been her friends, Vermont was now obliged to adopt policy in the room of power. He ascribed the late resolution of Congress, not to the influence of friends, but the power of enemies, believing that Lord Germain's letter had procured that, which the public virtue of the people could not obtain.

* For these proceedings, see Slade's S. P., p. 160.

* For these resolutions see Slade's S. P., p. 163.

During these proceedings, new difficulties were opening to Vermont in her eastern and western unions. A communication was received by Governor Chittenden from one of the sheriffs in the eastern union, informing him that the government of New Hampshire, were about taking coercive measures to bring those citizens of that state, who had joined Vermont, again under their laws and authority. The governor, on the 14th of December, directed General Paine, then lieutenant governor of the state, to call out the militia on the east side of the mountains, for the assistance of the sheriffs and the defence of the citizens; and, if armed force should be employed by New Hampshire, that he should repel it by the same. Mr. Paine forwarded a copy of this order to the council of New Hampshire, and informed them, that, if hostilities were commenced, he should execute his orders, and that New Hampshire must be accountable for the consequences. With these communications, commissioners were also sent to New Hampshire, to endeavor to accommodate matters, and prevent the effusion of blood.

On the other hand, the military force was called out in New York, to prevent Vermont from executing her laws over the inhabitants of her western union, and to aid the sheriff of New York in apprehending several persons in the territory who had rendered themselves particularly obnoxious to the government of that state. This force was commanded by General Gansevoort, who, being informed that Colonel Walbridge was advancing with a large body of troops from the Grants, wrote to him on the 18th of December, to be informed of the object of his movement. Walbridge replied that it was to protect the inhabitants, who, in consequence of the union, professed allegiance to the state of Vermont; that he wished conciliatory measures might be adopted, but, if those persons who professed to be citizens of Vermont should be imprisoned and their property destroyed, he would not be accountable for the consequences.

Affairs seemed now to have reached an alarming crisis, and all parties trembled at the prospect of a civil war. Happy was it that hostilities were not commenced before the parties had taken time to reflect upon the consequences of such a measure; for when they looked at the momentous struggle in which their country was engaged, every philanthropist was fully convinced that no differences between the states should, on any account, be permitted to endanger the cause of American liberty and independence.

Fortunately, about this time, Governor Chittenden received a reply to his communication of the 14th of November, from General Washington, which was obviously dictated by his paternal solicitude for the good of his country, and for a happy termination of the troubles in relation to Vermont. This letter is dated January 1st, 1782, and from it we extract the following paragraph:

"It is not my business, nor do I think it necessary, now to discuss the origin of the right of a number of inhabitants, to that tract of country, formerly distinguished by the name of the New Hampshire grants, and now by that of Vermont. I will take it for granted that their right was good, because Congress, by their resolve of the 7th of August, imply it; and by that of the 20th are willing fully to confirm it, provided the new state is confined to certain described bounds. It appears therefore to me, that the dispute of boundary, is the only one that exists; and, that being removed, all other difficulties would be removed also, and the matter terminate to the satisfaction of all parties. You have nothing to do, but to withdraw your jurisdiction to the confines of your own limits, and obtain an acknowledgment of independence and sovereignty under the resolve of the 20th of August, for so much territory as does not interfere with the ancient established bounds of New Hampshire, New York and Massachusetts. In my private opinion, while it behoves the delegates to do ample justice to a people, sufficiently respectable by their numbers, and entitled, by other claims, to be admitted into the confederation, it becomes them also, to attend to the interests of their constituents, and see, that under the appearance of justice to one, they do not materially injure the others. I am apt to think this is the prevailing opinion of Congress."*

Being endeared to all the friends of liberty by his integrity and virtue, and by his disinterested exertions and sacrifices for the good of his country, such a communication from General Washington might reasonably be expected to exert a powerful influence upon the minds of the leading men in Vermont, and the event showed that it did. At the next meeting of the legislature, which was held at Bennington, this letter was laid before them. It served to open their eyes to the former errors of government, and, knowing it to have come from a man, who had only the interests of his *whole* country at heart, his advice was received with the greatest

* Williams' History, vol. II, page 225.

VERMONT UNIONS DISSOLVED.

PROCEEDINGS OF CONGRESS.

deference, and, after mature deliberation upon the subject, the assembly on the 22d of February, 1782, resolved to comply with the preliminary required by the resolution of Congress of the 20th of August, and relinquish all claims to jurisdiction beyond the bounds therein mentioned.*

Thus was dissolved a union which had greatly increased the power and consequence of Vermont, and which, it was believed, had prevented the division of Vermont between New Hampshire and New York. But this union was not dissolved without a struggle and much dissatisfaction in those parts which were cut off from Vermont, by the prescribed boundaries. The inhabitants of those parts had eagerly sought the union with Vermont, and they were too well satisfied with it, willingly to return to their allegiance to those states from which they had withdrawn.

Vermont, having complied with the requirements of Congress, now confidently expected an immediate recognition of her independence, and an admission into the federal union; and with it a termination of the disagreeable controversy with New York. The legislature therefore proceeded to choose four agents to arrange the terms of admission, and then take their seats in Congress as representatives of Vermont. But, in their expectations, the people of Vermont were again doomed to disappointment; a disappointment, the pain and mortification of which could only be exceeded by the impolicy and injustice of the neglect which occasioned it. Congress still refused to admit Vermont into the union, and again reverted to her policy of evasion and delay.

SECTION II.

Proceedings of Congress—Disturbances in Vermont—from the Dissolutions of the unions in Vermont, Feb. 22d, 1782, to the Treaty of Peace between the United States and Great Britain, January 20th, 1783.

The refusal of Vermont on the 18th of October, 1781, to comply with the resolution of the 20th of August, had been communicated to Congress, and while the assembly of Vermont, in February, 1782, was reconsidering the subject and effecting a compliance with said resolution, Congress was engaged in warm debate upon their preceding refusal. On the first day of March, several spirited resolutions were proposed and discussed

in Congress. These resolutions declared that, if Vermont did not, within one month from the time these resolutions were communicated to Governor Chittenden, comply with the resolution of the 20th of August, and relinquish her jurisdiction beyond the bounds therein named, such neglect and refusal would be regarded as an indication of hostility to the United States.

In that case Congress would regard the pretensions of Vermont for admission into the union as fallacious and delusive, and would, thereafter, consider the lands in Vermont to the eastward of the ridge of the Green Mountains, as granted to New Hampshire, and the lands to the westward of said line as granted to New York; and that the commander in chief of the American armies be directed to employ the military forces of the United States to carry these resolutions into full execution. After a long debate and several trials, it was found that a vote could not be obtained to pass these resolutions, and a few days after, as the excitement was beginning to subside, the agents from Vermont arrived at Philadelphia.

These agents were Jonas Fay, Moses Robinson, Paul Spooner, and Isaac Tichenor, and they were instructed "to negotiate and complete, on the part of Vermont, the admission thereof into the federal union, and to subscribe articles of perpetual confederation thereunto." On the 31st of March, 1782, they officially laid before Congress the proceedings of the legislature of Vermont on the 22d of February, by which they had fully complied with the requirement of the resolution of the 20th of August. Congress now again took up the subject and referred it to a committee of five members, who, on the 17th of April, reported, "That in the opinion of the committee, Vermont had fully complied with the resolution of the 20th of August as preliminary to the recognition of her sovereignty and independence, and admission into the federal union; and that the conditional promise of such recognition and admission by Congress, is thereby become absolute and necessary to be performed."

The committee then proposed a resolution declaring "That the district, or territory called Vermont, as defined and limited in the resolution of Congress of the 20th of August, 1781, be, and it hereby is, recognised and acknowledged, by the name of the state of Vermont, as free, sovereign and independent; and that a committee be appointed to treat

* Williams' H. Vol. II. p. 227, Slade's S. P. p. 103.

* For this Report, see Slade's State Papers, page 170.

and confer with the agents and delegates from said state, upon the terms and mode of the admission of said state into the federal union." When this report was read, motions were successively made that its consideration be assigned to the first Tuesday in October, the first Tuesday in June, and to Monday next, all of which were decided in the negative.

By these votes it became evident that Congress did not intend to come to any decision upon the affairs of Vermont, and the agents of Vermont, disappointed at the result, addressed a letter to the president of Congress on the 19th of April, and immediately left Philadelphia.* In this communication they say, that in consequence of the plighted faith of Congress, and the advice of gentlemen of the first character in America, Vermont had been induced to comply, in the most ample manner, with the resolution of the 20th of August, and that they had officially communicated said compliance to Congress. They expressed their disappointment at the delay of Congress to execute, on their part, the spirit of said resolution, and pointed out the critical situation, to which Vermont was reduced by casting off a considerable portion of her strength,—by being exposed to the main force of the enemy in Canada, and by receiving no aid from the United States, in whose cause she had freely fought and suffered.

When these proceedings of Congress became known in Vermont they produced universal dissatisfaction. It was the general opinion that the resolution of the 20th of August, had been designed to dupe the assembly to a compliance, for the purpose of weakening Vermont and rendering it less dangerous to contravene her designs and wishes. Faith in the virtue and integrity of congress was nearly destroyed; and by these measures of that body, the people, and the assembly of Vermont, were determined to adhere to the boundaries, to which they had agreed, and rely upon their own strength, resources, and management for defence and safety, and urge no further upon Congress their right to a confederation with the United States. Still, that it might appear to the world that Vermont was not in fault, the assembly, at their session in October, again appointed agents with full powers to complete arrangements for her admission into the union.

During these transactions, New York resolved to see what could be effected by adopting a more lenient policy towards the people of Vermont. Accordingly on

the 14th of April, 1782, the Legislature of New York passed several acts in relation to this district.* By the first of these acts full pardon and immunity was granted to the inhabitants of the district, for all crimes and offences with which they stood charged, excepting for the crime of treason in adhering to the king of Great Britain, and for murder. This was followed by another act confirming—*first*, all the grants made by New Hampshire within the district, which were prior to the grants of the same lands by New York; *secondly*, all the grants made by New York, of lands not previously granted by New Hampshire, and such as were made in confirmation of New Hampshire grants; *thirdly*, all Vermont grants of lands not previously granted, and *lastly*, the possessions of individuals not included in any of the above-mentioned grants, to the amount of 500 acres each, and no more; all these confirmations to be made without requiring any fee to the government.

But the people of Vermont had now gone too far, and had established their government upon too firm a basis to be shaken from their purpose of independence by any, however specious, devices of New York. They even appeared to have adopted a fixed determination to listen to no propositions from any quarter by which their separate existence as a state should be endangered; and as the acts above-mentioned were not to take effect until Vermont renounced her assumed powers of government, and the people returned to their allegiance to New York, they seem to have been treated by Vermont with very little attention.

Notwithstanding the unsettled and embarrassing state of her relations to Congress and the neighboring states, the internal tranquillity of Vermont had been, for some time, but little disturbed. Her political institutions had been gradually maturing, and the organization of her government had assumed a regularity and efficiency which commanded the obedience and respect of the great body of the citizens. New York had not relinquished her claim to jurisdiction over the territory, but she had not, of late, made any serious effort to exercise it; and had contented herself with opposing the admission of Vermont into the union, and by endeavoring, in the manner we have just related, to bring over the people to her own interest. But while a vast majority of the people of Vermont yielded a willing obedience to her authority, and were ready to make almost any sacrifice to sus-

* This letter may be seen in Slade's State Papers, page 172.

* For these Acts, see Slade's Vt. State Papers, page, 173.

ADHERENTS OF N. Y. PUNISHED. RESOLUTIONS OF CONGRESS. REMONSTRANCE OF VT.

tain her independence and government, there were some among her citizens whose submission was reluctant, and who were ready to embrace any favorable opportunity to renounce their allegiance and support the claims of New York.

As the continental troops had been withdrawn from the northern frontier, and as Vermont was exposed to invasion by the enemy from Canada, she found it necessary to order a draft of militia for the purpose of defence. Those citizens of Vermont, who were disaffected toward the government, resolved to take this opportunity to resist its authority. They were encouraged in this measure by the governor of New York, who gave commissions to sundry persons in the southeastern part of the county of Windham, and had recommended the organization of a military force for the purpose of opposing Vermont, and enforcing the laws of New York. Vermont became alarmed at these proceedings, and, having employed lenient measures in vain, ordered out the militia to suppress them. The leaders in the rebellion were taken, five of the most obnoxious of whom were banished from the state, and others fined or otherwise punished.

Disappointed in their attempts to resist the authority of Vermont, the insurgents applied to the government of New York, under which they pretended to have acted, for support and remuneration for their sacrifices and losses in consequence of their rebellion. But the desired support New York was not able to afford. Vermont feared not her power, and therefore her promises and her threatenings were alike disregarded. A remonstrance was then forwarded to Congress setting forth that Vermont had proceeded to exercise jurisdiction over the persons and property of sundry persons, who professed themselves to be subject to the state of New York. This remonstrance was seconded by a letter from the governor of New York, and on the 14th day of November, 1782, the committee in Congress to whom the subject was referred, reported "That the measures complained of were probably occasioned by the state of New York having given commissions both civil and military to persons residing in Vermont." They also recommended, that said commissions be revoked, and that Vermont should make satisfaction to the persons, who had been banished, or who had sustained damages. But Congress refused to adopt the resolution recommended.

On the 5th of December, Congress again took up the matter, but instead of fulfilling their engagement to Vermont

made by the resolution of the 20th of August, 1781, their proceedings were full of censure and threatening against Vermont, for having exercised authority over persons, who professed allegiance to the state of New York, in violation of the resolutions of Congress,* passed on the 24th of September, 1779, and on the 2d of June, 1780. Among other things they resolved, that Vermont be required to make full restitution to the persons condemned to banishment or confiscation of property, and that they be not molested on their return to said district. They close by resolving, "that the United States will take effectual measures to enforce a compliance with the aforesaid resolutions, in case the same shall be disobeyed by the people of the said district."

The faith of the people of Vermont in the wisdom and integrity of Congress, weakened by several of their former acts, was by the foregoing nearly destroyed, and with it the reverence and respect of the people for that body. The governor and council of Vermont, on the 9th day of January, 1783, returned a spirited remonstrance† to the above resolutions, in which Congress was reminded of their solemn engagement to the state of Vermont, in the resolution of the 20th of August, and which, after the fullest compliance on the part of said state with the requirement of Congress, Congress had refused or neglected to fulfil. Congress were told, that, by their own articles of confederation, they had no right to intermeddle with the internal policy of any of the United States; and least of all with that of Vermont, from which she had received no delegated authority whatever. It asserted that Vermont had as much authority to prescribe measures to Congress, as Congress had to revoke the legal decisions of Vermont in the case of the criminals already mentioned.

The remonstrance went on to assert that Vermont had had an independent jurisdiction since the royal decision in 1764, and they did not intend to be resolved out of it by the influence, which their *old adversary*, New York, possessed in Congress;—that Vermont had no controversy with the United States, as a whole; but that she was at all times, ready and able, to vindicate her rights and liberties against the usurpations of New York. It declares that Congress has been so mutable in their resolutions respecting Vermont, that

* These Resolutions may be found in Slade's State Papers, page 177.

† This able document, which is alike distinguished for force of reasoning, and severity of rebuke, may be found in Slade's State Papers, page 178-185.

REMONSTRANCE OF THE ASSEMBLY.

ETHAN ALLEN'S PROCLAMATION.

it is impossible to know on what grounds to find them. At one time they guarantee a part of her lands to New Hampshire and New York, still leaving a place for the existence of Vermont though much diminished in extent. At another time they are controlling the internal government of Vermont. And again, at another time prescribing terms of confederation, with the United States, and when these are complied with on the part of Vermont, Congress will not ratify the union. After giving a full reply to all the topics contained in the resolutions of Congress, the remonstrance concludes with a request to be immediately admitted into the union, and with an assurance that she will not recede from her compliance with the resolution of the 20th of August, 1780.

The assembly met at Windsor, on the 13th of February, 1783, and on the 26th, a remonstrance, like the preceding, spirited and decisive, was forwarded by that body to Congress. It announced in the plainest terms that Congress had no business to intermeddle in the internal affairs of Vermont, and that Vermont was fully determined to maintain her independence and jurisdiction within her own limits. She, therefore continued, unawed by the threatenings of Congress, to enforce the decisions of her courts of justice, and in the administration of the affairs of government, and Congress, as it appears, did not judge it prudent to attempt, by force, to carry into effect her resolutions of the 5th of December, 1783.

SECTION III.

Disturbances in Vermont growing out of the controversy with New York, and the general embarrassments occasioned by the Revolution.

The disturbances in the county of Windham, to which we alluded in the preceding section, perhaps deserve a more particular notice than was there given. At the first organization of the government of Vermont in 1778, there were many people in the southeastern part of the state, who were in favor of New York, and of course opposed to the independence of Vermont. These persons embraced every opportunity to embarrass the newly organized government, and at several times resisted the authority of Vermont by force. The centre of this opposition seems to have been at Guilford, at that time the most populous town in the state, numbering nearly 3000 souls. During most of the revolutionary war a majority of the inhab-

itants of this town were friendly to New York and were therefore denominated "Yorkers;" and at their town meetings it was usually a part of their business to appoint "a committee to defend the town against the pretended state of Vermont."

In several of the neighboring towns, particularly in Brattleborough, the disaffected towards the government of Vermont were considerably numerous, and there was in these towns an organized opposition to the government of the state, and conventions of delegates from them occasionally assembled for the purpose of adopting an uniform plan of resistance throughout the whole. The measures of the government, most vigorously opposed, were the collection of taxes and the drafting of men for the defence of the state; and it was a customary part of their business at their town meetings in Guilford, while the Yorkers were a majority, to appoint a special "committee to forbid the constable acting." And to secure a majority at their town meetings, the *new state* people were frequently excluded from the polls by an armed force, collected from the neighboring towns.

It appears that in Guilford and some of the other towns, the two parties had each a town organization of their own, and that, in some cases, there were two sets of town officers, one professing allegiance to Vermont, and the other to New York. Between these, and their partizans on each side, there were frequent skirmishes, some of which were not terminated without the shedding of blood. During the years 1783 and 1784, the enmity of the parties was carried to an alarming extent. Social order was at an end; physicians were not allowed to visit the sick without a pass from the several committees. Handbills from various quarters inflamed the minds of the people. Relatives and neighbors were arrayed against each other. The laws of Vermont were disregarded by the partisans of New York, and her executive officers were openly resisted.

In this state of things, in the summer of 1783, General Ethan Allen was directed to call out the militia for enforcing the laws of Vermont, and for suppressing insurrection and disturbances in the county of Windham. Allen proceeded from Bennington at the head of 100 Green Mountain Boys, and on his arrival at Guilford, he issued the following proclamation, concluding it with an oath: "I, Ethan Allen, declare that unless the people of Guilford peaceably submit to the authority of Vermont, the town shall be made as desolate as were the cities of Sodom and Gomorrah." The Yorkers having fired upon Allen and

DISTURBANCES IN WINDHAM COUNTY.

DISPERSION OF THE YORKERS.

his men, were pursued, and all either taken prisoners or dispersed. Those taken were put under bonds for their good behavior, and were compelled to furnish supplies and quarters for the troops. Under Allen's martial law, the constable found no difficulty in the collection of taxes: nor was he very scrupulous about the sum assessed in the tax bill. Produce, horses, cattle and sheep, and whatever else could be found belonging to the most violent Yorkers, were taken and sold for the benefit of the state.

During the following winter the disturbances became still more serious. On the night of the 17th of January, 1784, a party of Yorkers from Guilford, commanded by David Ashcroft and William White, about 12 o'clock at night, attacked the inn of Josiah Arms in Brattleborough, which was the quarters of General Farnsworth, Major Boyden, Constable Waters, and some others holding offices under the government of Vermont, and demanded the immediate surrender of Waters, who had been guilty of extorting taxes from persons professing allegiance to New York. Not being in a condition to make an effectual resistance to an armed force, Waters voluntarily surrendered himself into the hands of the Yorkers, but not till after they had fired about 30 balls through the house, and wounded Major Boyden in the leg, and shot a traveller through the thigh. Waters was carried into Massachusetts, but the party being pursued by a few Vermonters, he was released the next day and returned.

The legislature of Vermont had, at their session in October, "voted to raise 200 men for the defence of Windham county against the Yorkers." * After the affair at Brattleborough, finding the people of Guilford determined to oppose the collection of taxes, Colonel S. R. Bradley, at the head of this force, proceeded, January 18th, to that town for the purpose of enforcing the collections. The parties of Yorkers were all dispersed without opposition, excepting one which had collected near the line of Massachusetts. This party, consisting of 25 men, fired upon the Vermonters as they advanced, by which one man was severely wounded. The Yorkers then retreated with all possible speed, over the line into Massachusetts. Several of the leaders were, however, taken and brought to merited punishment, by whipping, fine, and pillory. † Another skirmish occurred on the 5th of

March, between a company of Vermonters under Captain Knights, and a party of Yorkers, near the south part of Guilford, in which the latter had one man killed and several wounded; but before the close of the year 1784, the Yorkers found their property mostly confiscated, and themselves so harshly handled by the civil and military authority of Vermont, that they either submitted and took the oath of allegiance to the state, or abandoned the country, and settled in other places. The greater part of them fled into the state of New York, and settled upon lands especially granted by that state for the benefit of these sufferers. This dispersion of her partisans from the county of Windham terminated the attempts of New York to maintain her authority in Vermont by means of a military force; and, although she did not readily acknowledge the independence of Vermont, she probably, from this period, relinquished all hope of overthrowing the government of Vermont, or of preventing the final acknowledgment of her independence by Congress.

These disturbances, growing out of the controversy with New York, were followed by some others of a different character. During the long protracted war with Great Britain, the people had, to a very great extent, neglected their private concerns, and, when that contest was brought to a favorable termination and they were allowed an opportunity to look about them, it was found that the affairs, not only of individuals, but of the states and the general government, were in a most embarrassed and wretched condition. The public debt of the United States exceeded \$40,000,000, and many of the states had contracted debts in carrying on the war, amounting to several millions. The buildings and farms of individuals had gone to decay, and their business had become deranged by neglect, and not a few had been obliged to contract large debts for the support of their families. The creditors, both of the public and of individuals, were becoming clamorous for their pay; while the resources of the country were exhausted, the paper currency of the country rapidly depreciating, and the amount of specie in existence being totally inadequate to meet the demand, the manner in which these debts were to be paid,—these creditors satisfied,—was a subject of deep solicitude.

In this state of things, taxes were attempted to be raised to meet the demands upon the general and state governments, and the courts, which had been to a very great extent suspended from the com-

* At the February session in 1784, the number was reduced to 20.

† See Col. Stephen R. Bradley's letter published in Spooner's Vermont Journal in Feb. 1784.

SHAY'S INSURRECTION.

QUESTIONS SUBMITTED TO THE PEOPLE.

mencement of the war, again resumed their functions, and numerous suits for the collection of debts were entered upon their dockets. These attempts to enforce collections, in the then exhausted and depressed state of the country, produced very extensive dissatisfaction among the people, and conventions of the malcontents were assembled in various parts of the country, at which their grievances were discussed, and resolutions passed, breathing threatenings of opposition and violence to the civil and judicial authorities. As the shortest way to postpone the payment of their debts, it was at length determined to prevent, by force, the sitting of the courts in which the suits were pending; and various attempts were made in different parts of the country to carry this determination into execution, which, in the state of Massachusetts, resulted in the memorable *Shay's Insurrection*, in the latter part of the year 1786 and beginning of 1787.

The condition of Vermont at this period, was much better than that of the confederated states. She had managed to pay her own troops during the war, by the avails of her public lands and other means, and having no connexion with Congress, no part of the burden of the public debt of the United States rested on her. But she was not equally exempt from the other causes of dissatisfaction, which operated in the confederated states. Many of the people, though possessed of houses and lands, were, in other respects, in low and straitened circumstances and so much incumbered with debts, that their immediate payment in the present scarcity of money, would require the sacrifice of all they had, and reduce themselves and families to a state of penury and starvation. Thus situated, it is not surprising, that the spirit of opposition to the judicial authority, which had manifested itself in the neighboring states, should make its appearance in Vermont.

So early as the spring of 1784, a convention from several towns was assembled at Wells, by which sundry resolutions were passed in relation to the general sufferings and embarrassments of the people, and a liberal amount of execration was meted out to the lawyers and sheriffs, but no disposition was manifested in this state to oppose the collection of debts by force till the year 1786. During the summer of this year, the sufferings of the people becoming severe and their complaints loud, on account of the extreme scarcity of money, Governor Chittenden in the month of August published an address to the inhabitants of the state, which was

evidently dictated by a paternal regard to their welfare and happiness. In this address he earnestly exhorts the people to be industrious and economical—to avoid as much as possible the purchase of foreign productions, and to give their attention to the raising of flax and wool, and the various necessaries for food and clothing; and he expresses the anxious hope that by their prudence and diligence—by their mutual forbearance and kindness—together with such assistance as the legislature should, at its next session, be able to afford,—their sufferings would be brought to a speedy termination, and themselves become a prosperous and happy people.

In October, the legislature met at Rutland, and measures, designed to relieve the pecuniary embarrassments of the people, occupied a large share of the session. In pursuance of this object two acts were passed; one making all such articles a tender upon execution, to the inhabitants of either of the United States, as are made a tender upon execution by their respective laws; and the other, compelling creditors to receive specified articles in payment, after the expiration of the times limited in the contract.* A preamble and sundry resolutions were also adopted, expressive of the extreme anxiety of the assembly to gratify the wishes of the people and relieve their embarrassments, and requiring the people to assemble in their respective towns on the 1st Tuesday of January, at the usual place of holding freemen's meetings, and there express by *Yea* or *Nay* their approval or disapproval of "emitting a small bank of paper money on loan or otherwise,"—of continuing the acts above mentioned, and of a general tender act. The yeas and nays on these subjects were to be transmitted to the speaker of the Assembly, to be a guide to the Legislature at its next session. But these several acts and resolutions did not serve to quiet all the people; for there were many who did not intend to be compelled to pay their debts in any way, and they judged it the shortest method of avoiding payments to prevent the sitting of the courts, in which judgments and executions might be obtained against them; and two attempts of this kind were made shortly after the session of the legislature at which the above acts and resolutions were passed, one in the county of Windsor, and the other in the county of Rutland.

On the last day of October, 1786, the

* These acts may be found in Stode's Vt. State Papers; the first on page 504, and the second on page 508.

ATTEMPTS TO STOP THE COURTS.

WINDSOR COUNTY.

RUTLAND COUNTY.

time fixed by law for holding the court of common pleas at Windsor, a mob of about 30 armed men, headed by Benjamin Stebbins and Robert Morrison, assembled near the court-house with the obvious design of preventing the sitting of the court. They were waited on by Benjamin Wait, the sheriff of the county, the riot act was read, and they were ordered to disperse; which order, after a little hesitation, they judged it prudent to obey. The court then went in, and proceeded to business without molestation.

Warrants having been issued for the ringleaders of the insurgents, Morrison was soon arrested, and indicted for a riot. He pleaded guilty, and threw himself upon the mercy of the court. The court sentenced him to suffer one month's imprisonment, to procure bonds of £100 for his good behaviour for two years, to pay a fine of £10, and the costs of suit. The insurgents, who belonged principally in Hartland, hearing of the arrest of Morrison, assembled at the house of Captain Lull, in that town, to the number of about 40, under arms, with the intention of rescuing their leader. This coming to the knowledge of the court, they ordered the sheriff to procure assistance, proceed to the place, arrest the insurgents, and commit them to prison. The sheriff having collected a small force, proceeded in the night to Hartland, came upon the insurgents unawares, and, after a short scuffle, in which some slight wounds were inflicted, but no lives lost, he succeeded in taking and committing to prison 27 of their number. These, on being arraigned before the court, pleaded guilty, and were sentenced to pay fines, and costs of court, and procure bonds for their good behavior for one year. This put an end to the disturbances in Windsor county, and the militia, which had, during these transactions, turned out to the number of five or six hundred, returned to their homes.

A few days after, a scene somewhat similar was acted at Rutland. On the 21st of November the court opened at that place, at 11 o'clock in the morning, and adjourned to 2 o'clock in the afternoon. In the mean time, a committee, pretending to have their appointment from the people, waited on the court and requested them to adjourn without day. The court informed them that after calling the docket and attending to the necessary business of the day, they would take their request into consideration. On opening the court in the afternoon, one Col. Lee, at the head of about 100 malcontents, rushed into the court house, and in a most insolent and riotous manner

began to harangue and threaten the court for not adjourning agreeably to request, upon which the court ordered the sheriff to adjourn till 9 o'clock the next morning.

The mob now refused to let the court depart; called for arms, which were immediately brought from a neighboring house, where they had been lodged for the occasion, and placed sentries at the door and around the house, making prisoners of the sheriff, judges, and a number of other gentlemen, whom they kept in confinement for several hours; but, finding they were not to be intimidated, they were suffered to depart. In the evening a committee of the insurgents, who styled themselves Regulators, again waited upon the judges at their lodgings, and renewed their demand for an adjournment without day, but were informed that it could not be complied with—that not only their oath and duty, but the honor and dignity of the government, obliged them to proceed in the necessary business of the court.*

Irritated at this answer, the rioters resolved to prevent, at all hazards, the sitting of the court the next day. With this view they took possession of the court-house, and messengers were sent to rally re-enforcements from the neighboring towns. In the mean time, orders were sent to Col. Clark and Col. Pearl and Lieut. Col. Spafford to call out the militia without loss of time for the support of government. These orders were issued about 8 o'clock in the evening, and were responded to with such alacrity that by 9 o'clock the next morning the two colonels above mentioned appeared with sufficient force to protect the court from further insult or molestation.

The insurgents left the court-house early in the morning, but continued in the vicinity during the day to the number of 150. In the evening, several of their leaders were arrested and committed to prison; but Lee, the chief in command, made his escape, and Capt. Cooly, of Pittsford, retired with about 40 of the insurgents in a body. The insurgents arrested were put upon trial, found guilty, and fined from £3 to £25 each, according to the aggravation of their offence, and were required to find sureties for their good behavior for one year.

In the mean time, the leaders of the insurgents, who had escaped arrest, sent expresses through the country with the

* This firm and dignified reply of the court may be found at length in the Vermont Gazette, printed at Bennington, Dec. 11, 1786.

RESOLUTION OF THANKS TO THE MILITIA.

BANK AND TENDER ACT.

most false and groundless reports respecting the answer of the judges, the proceedings of the court and the treatment of the prisoners, and on Sunday morning, the 26th of November, the insurgents again assembled in Rutland to the number of 200. These were mostly men who had not been engaged in the riots of the preceding Tuesday and Wednesday, and when they had ascertained the facts in the case, and the utter falsehood of the reports, which had induced them to countenance the rebellion, a large proportion of them declared themselves in favor of the government, and joined the militia under Col. Clark. This so disheartened the remainder that they immediately dispersed, and left their leaders to their fate. On Monday evening, every thing being quiet, the militia received the thanks of the court for their prompt and efficient services, and were discharged. The court continued to sit unmolested till it had finished its business, and then adjourned without day.

Thus terminated the feeble attempts to impede the course of justice in Vermont; and the event showed, that, notwithstanding the general distress and dissatisfaction, the yeomanry of the country were firmly attached to the principles of constitutional liberty, and would utterly discountenance any resort to lawless violence for the redress of grievances. It showed that it was the settled determination of the great body of the people to support the constitution and government of their choice, the courts of justice which they had established and the laws which they had enacted, as the only sure means of securing to themselves and their children the fruits of their own industry, and to endure patiently the evils and sufferings under which they labored, until by peaceable and constitutional means their removal could be effected.

The next session of the Vermont Legislature, after the transactions which have just been related, was commenced at Bennington on the 15th of February, 1787, and on the 2d day of March the following resolution was passed by the General Assembly, and ordered to be published:

"Resolved, That this house entertains a high sense of the services done to this state by the officers and soldiers, whose spirited exertions crushed the late daring insurrection against government in the counties of Rutland and Windsor, and does hereby return the said officers and soldiers their hearty thanks."

At this session, the yeas and nays taken on the 1st Tuesday in January upon the questions submitted to the people

at the October session, as already mentioned, were laid before the General Assembly, and exhibited the following results.

1st. Shall there be established a Bank for the issue of paper money on loan to the people? Yeas 456, Nays 2,197. 2dly. Is it expedient to pass a general Tender Act? Yeas 150, Nays 881. 3dly. Shall the present act making articles a tender on execution be continued? Yeas 481, Nays 611. 4thly. Shall the act for the fulfillment of contracts in kind after the specified time of payment is elapsed, passed in October, 1786, be continued? Yeas 855, Nays 225. An act was also passed, making neat cattle, beef, pork, sheep, wheat, rye, and Indian corn a lawful tender, if turned out by the debtor on any execution, which must be received by the creditor at the value of their appraisal by men under oath. These proceedings served to check the legal enforcement of collections; the people, relieved in a measure from vexatious litigation, now applied themselves with greater diligence to their respective avocations; business gradually resumed its wonted activity; the earth, by the blessing of Providence, rewarded abundantly the labors of the husbandman; and the hardships and sufferings of the people were soon relieved and forgotten in the midst of the general prosperity and happiness.

SECTION IV.

Settlement of the Controversy with New York, and the admission of Vermont into the Union.

On the 20th of January, 1783, the preliminary articles of peace were signed, which terminated the war with Great Britain, and established the independence of the United States. By this event, Congress was in a great measure relieved from its embarrassments with regard to Vermont, and Vermont released from her fears. The British army upon the northern frontiers of Vermont, whose efforts had been so long paralyzed by the artful policy of a few individuals, was now withdrawn, and the people of Vermont were now in little dread of external foes, nor very solicitous for an immediate union with the confederated states. Their confidence in the wisdom and ability of Congress, which had been much impaired by the evasive and vacillating policy of that body with regard to Vermont, during the war, was now dearly destroyed. They

CONDITION OF PUBLIC AFFAIRS.

beheld the United States without a currency, without any adequate revenue, while their armies were unpaid and dissatisfied, their credit gone, and the government daily sinking into insignificance and contempt.

Vermont, on the other hand, in consequence of being refused admission into the federal union, was, in a great measure, freed from the difficulties in which congress and the confederated states were involved. Her government, having learned wisdom from experience, was moving prosperously onward and was daily increasing in firmness and efficiency. The United States had contracted an immense debt in the prosecution of the war, but the calls of Congress upon the people to pay this debt, could not reach into Vermont. Vermont, it is true, was obliged to pay the forces which she had raised for her own defence, but these were few, as she had, during much of the war, relied for safety more upon her policy, than her power. And, much of the territory of Vermont being ungranted and at the disposal of the legislature, after the close of the war, settlers from other states, invited hither by the mildness and efficiency of the government, the comparative exemption from taxes, and the fertility and cheapness of the lands, annually made large accessions to her population and resources, and enabled her, out of the avails of her public lands, to supply her treasury and pay her debts without imposing oppressive burdens upon the people. The people of Vermont, observing that their own condition was gradually improving, while that of their neighbors was constantly growing worse, ceased to regard their admission into the union as an event to be desired, or calculated to better their condition.

In this state of things, many of the leading statesmen and philanthropists in the United States began to be filled with apprehension and alarm at the operation and tendency of public affairs. They perceived that the powers, with which Congress was invested, were totally inadequate to the purposes of government, and that a new, more solid and efficient organization was indispensable, in order to secure to the people of the United States, and their posterity, the blessings of that liberty and independence, which they had purchased at the expense of so much blood, and toil, and treasure. At the suggestion of James Madison, of Virginia, and in conformity with a resolution of Congress, a convention of delegates from the several United States assembled at Philadelphia in 1787, which, after ma-

CONSTITUTION OF UNITED STATES.

ture deliberation, adopted a Constitution, which gave and secured to the central government all the powers necessary to give it firmness and efficiency. This constitution was ratified by the states, and the first Congress assembled under it, on the 3d of March, 1789.

After the adoption of the federal constitution, the policy and proceedings of the new Congress were carefully observed by the people of Vermont. During two sessions they found the government laboring to restore public confidence by providing for the payment of the public debts, and by the establishment of equal law and justice in every department of the federal government. Their measures appeared to be marked with so much wisdom and prudence, as, in a great degree, to restore to the people of Vermont that confidence in the federal government, which had been nearly destroyed by the evasive and vacillating policy of the old Congress, and to remove the aversion, which they had for some time felt, to a confederacy with the United States.

The ancient difficulty with New York, however, remained unsettled. That state well knew that Vermont would now remain a free and independent state, and she probably felt but little anxiety that it should be otherwise. But the former governors of New York had made grants of large tracts of land in Vermont, the validity of which, the government of Vermont refused to admit, and the grantees were constantly complaining to the government of New York of the injury done them, in not being permitted to take possession of their property. The government of New York did not conceive that it was under very strong obligation to refund what had been extorted for these grants by the cupidity of the royal governors of that province before the war; yet, she manifested a disposition to compromise the matter, and have the difficulties adjusted on amicable terms.

Events also occurred in relation to the federal government, which disposed New York still more, to admit the independence of Vermont, and to wish her confederation with the United States. It was perceived that by the exclusion of Vermont, the eastern states were deprived of their just representation in Congress, and New York could not but see, that, if their old difficulties could be settled, the interests and influence of Vermont would, in almost every instance, coincide with her own. It therefore soon became apparent that public sentiment in New York was in favor of a reconciliation. 'Vermont, it was said, is in full possession of indepen-

COMMISSIONERS APPOINTED.

CONTROVERSY SETTLED.

dence ; her government is as well organized and administered as that of the other states ; and shall a controversy, which originated in the proceedings of royal governors and councils, whose authority has long been extinct, be permitted to mar the constellation of America, and deprive the north of its just weight in the council of the nation ?

In accordance with these conciliatory views, the legislature of New York, on the 15th of July, 1789, passed an act appointing commissioners with full powers to acknowledge the sovereignty of Vermont, and adjust all matters of controversy with the same. On the 23d of October following, the legislature of Vermont appointed commissioners on their part to treat with those of New York, and to remove all obstructions to the admission of Vermont into the federal union.* The commissioners on both sides were very anxious that an adjustment should be effected, and the only point which occasioned any debate, was the amount of compensation which claimants under New York grants should receive from Vermont, on account of her having re-granted the same lands, and excluded the New York grantees from their possessions. But the settlement of this point, after two or three meetings, was amicably agreed upon by the commissioners.

On the 7th of October, 1790, "the commissioners for New York, by virtue of the powers to them granted for that purpose, declared the consent of the legislature of New York, that the state of Vermont be admitted into the union of the United States of America ; and that immediately upon such admission, all claims of jurisdiction of the state of New York, within the state of Vermont, shall cease ; and thenceforth, the perpetual boundary line of the state of Vermont shall be as was then holden and possessed by Vermont," that is, the west lines of the most western towns which had been granted by New Hampshire, and the middle channel of lake Champlain.

With regard to the lands which had been granted by New York, "the said commissioners, by virtue of the powers to them granted, declare the will of the legislature of New York, that if the legislature of the state of Vermont should, on or before the first day of January, 1792, declare that on or before the first day of June, 1794, the state of Vermont would

pay to the state of New York the sum of thirty thousand dollars, that immediately from such declaration by the legislature of the state of Vermont, all rights and titles to lands within the state of Vermont, under grants from the government of the colony of New York, or from the state of New York, should cease," those excepted which had been made in confirmation of the New Hampshire grants.

This proposal and declaration being laid before the legislature of Vermont, were readily agreed to on their part ; and on the 28th of October, 1790, they passed an act directing the treasurer of the state to pay the sum of thirty thousand dollars to the state of New York, at the time proposed ; adopting the west line above mentioned as the perpetual boundary between the two states ; and declaring all the grants, charters and patents of land, lying within the state of Vermont, made by or under the late colony or present state of New York, to be null and void, those only excepted which had been made in confirmation of the grants by the governor of New Hampshire.*

Thus was terminated a controversy which had been carried on with great spirit and animosity for twenty-six years ; and which had, on the part of Vermont, called into exercise native courage and talents, which have few parallels in ancient or modern times. The difficulties with New York being adjusted, the legislature of Vermont proceeded to call a convention for the purpose of ascertaining the views of the people with regard to an union with the United States. This convention assembled at Bennington, on the 6th day of January, 1791, and, after deliberating and debating the subject for four days, it was finally voted, yeas 105, and nays 2, that application be made for admission into the federal union ; and the convention was then dissolved.

On the 10th of January, 1791, the legislature of Vermont met at Bennington, and on the 18th, they chose the Hon. Nathaniel Chipman and Lewis R. Morris,

* The commissioners on the part of Vermont were Isaac Tichenor, Stephen R. Bradley, Nathaniel Chipman, Elijah Paine, Ira Allen, Stephen Jacobs and Israel Smith ; and on the part of New York, Robert Yates, John Lansing, Gulian Verplank, Simeon De Witt, Egbert Benson and Melancthon Smith.

* On the 8th of June, 1812, Smith Thompson, Simeon De Witt and George Tibbits were appointed on the part of New York, and on the 6th of November following, Joseph Beman, Henry Olin and Joel Pratt on the part of Vermont, commissioners to run the line between the two states, which was done during the two succeeding years, 1813 and 1814, and the necessary monuments erected. The southwest corner of the state is at a stone on a high hill, distant 50 chains N. 82° W. from the northwest corner of Massachusetts ; from thence along the west side of Pownal the line is very irregular, as may be seen upon my Map, till it reaches near the corner of Bennington, from which point it pursues a straight course till it reaches Poultney river. A bill and plan of this survey are preserved in the office of the Secretary of State at Montpelier.

ADMISSION INTO THE UNION.

CONDITION OF VERMONT.

Esq. commissioners to attend Congress, and negotiate the admission of Vermont into the Union. These commissioners immediately repaired to Philadelphia, and laid before the president the proceedings of the convention and legislature of Vermont; and on the 18th of February, 1791, Congress passed an act which declared, "that on the 4th day of March, 1791, the

said state, by the name and style of "the state of Vermont," shall be received and admitted into their union, as a new and entire member of the United States of America." This act was passed without debate, and without a dissenting vote, and by it were terminated all the controversies with regard to Vermont.

CHAPTER VI.

LEGISLATIVE PROCEEDINGS OF VERMONT AFTER HER ADMISSION INTO THE UNION.

SECTION I.

Extending from the admission of Vermont into the Union in 1791, to the resignation and death of Gov. Chittenden in 1797.

We have now traced the history of Vermont from the earliest settlements down to the time of her admission into the federal union. Thus far her history has been peculiar to herself, and has been filled with incidents of uncommon interest; the more so on account of their unlikeness to what happened in any other individual state. Previous to the revolution, all the *original* states of the union were provinces under the crown of England, each having an organized provincial government. But not so with Vermont. She had never been recognized by the crown as a separate jurisdiction; nor had she herself, after the royal decision in 1764, by which she was placed under New York, ever recognized the authority of that province, or of any other external power. Regarding herself as placed by that decision in a state of nature, her citizens had formed themselves into a body politic—into a little independent republic, for their mutual benefit and defence, and by the boldness, the wisdom, and the prudence of her statesmen, she had succeeded in organizing an efficient government for the regulation of her internal affairs, and had adopted a system of jurisprudence fully adequate to the necessities of the people.

But from the time of the admission of Vermont into the federal union, her history loses in a great measure, its separate and peculiar character, and becomes, either a part of the history of the United

States, or resembles, in its leading features, that of the other individual states. We shall, therefore, from this period, in pursuing the chronological order of events in Vermont, confine ourselves, principally, to a rapid sketch of her legislative proceedings, reserving for separate consideration the history of our literary institutions, religious denominations and several other topics.

At the time Vermont became a member of the confederacy, her own government had become systematic and stable by the practical experience of thirteen years, and that of the United States had been placed upon the foundation of its present constitution. At the head of these governments were two men, who were endeared to the people by their long and disinterested public services, and in whose abilities and virtues the fullest confidence was reposed. These men were Thomas Chittenden, governor of Vermont, and George Washington, president of the United States.

From this era in the history of Vermont and in that of the United States, the two governments, though occasionally slightly agitated by the bickerings of party, have gone steadily onward in their career of prosperity, diffusing their blessings through every portion of the community. The tranquillity of Vermont was, for several years, scarcely affected by the policy and intrigues of demagogues and aspirants after office. The attachment of the people to their old governor was so general, that the politicians scarcely attempted to bring forward any other candidate for the first office in the gift of the people, and neither the honors, nor the emoluments

FRENCH REVOLUTION.

RISE OF PARTIES.

of the other state offices, were such as to render them objects of general contest or ambition. The legislature met annually in the beginning of October, and during the first week of the session they usually proceeded to make the appointments of the civil officers for the succeeding year, and this was done for several seasons without any considerable electioneering or management. After this business was disposed of, they proceeded to enact such laws, as were required by the exigencies of the people; and they usually completed the whole business of legislation in three or four weeks, affording to artful demagogues but little opportunity to acquire power, influence, or popularity.

During this period of tranquillity and union, the legislature of Vermont adopted a digested and judicious code of laws; and for a while nothing seemed to mar the general harmony. But subsequent events proved this tranquillity to be like those calms which precede the convulsions of nature. Causes were then in operation, which were destined to produce fearful divisions and animosities among the people of the United States. The French nation, urged onward by their infidel philosophy, and by the example of America, had overthrown their established government, abolished the ancient restraints of law and religion; and they vainly imagined that they were on the high road to a state of perfectibility, such as the world have never yet seen.

The American people, grateful for the aid which they had received from France, and anxious that the blessings of liberty should be more generally diffused, had watched the progress of the French revolution with deep interest, and for a while it was generally believed, that France would become a republic with a government much more perfect than that of the United States. But when she abandoned the principles of common sense, and discarded morality and virtue, many of the people of the United States became convinced that, instead of promoting rational liberty, they had opened the flood-gates of anarchy, to be closed only by a despotism more severe than that under which they had previously groaned. Thus, while a part of the people wished to go forward and follow the French in pursuit of their chimerical scheme of perfectibility, another party was fearful of the consequences, and chose rather to remain within the bounds of reason and experience.

In this manner the people of the United States, and of Vermont as a portion of the union, gradually became divided into two distinct parties, both of which avowed

their attachment to the constitution of the country, and yet both desired alterations in that instrument. While one party wished to improve the constitution by increasing the powers of the government, the other wished to do it by rendering the government more democratic, and thus increasing the power of the people. These parties by degrees increased in strength and violence, but were for several years much restrained in their proceedings by the virtue and influence of Washington, and, in Vermont, by the judicious administration of Governor Chittenden.

The extreme simplicity which characterized the legislative proceedings of Vermont, during the administration of Governor Chittenden, left but little room for the intrigues of politicians, or for the progress of party and faction. It was not then the custom of the governor to make a speech at the opening of the legislature, and consequently the different parties had not then a bone of contention about which to wrangle, as they had, during subsequent administrations; and, previous to the resignation and death of Governor Chittenden, in 1797, party spirit in Vermont cannot be said to have assumed a very serious aspect. As through the instrumentality of Governor Chittenden, Vermont was chiefly enabled to establish her independence as a state, and as he for many years held the first office in the gift of the people, we shall close this section with a short sketch of his biography.

It has so happened, that almost every age of the world has produced individuals, who seem to have been moulded, by nature, particularly for the exigencies of the times in which they lived. There have always been some master spirits, who were peculiarly fitted to control the agitated elements of public opinion, and either to soothe them into a calm, or else to mount upon the wind and direct the storm; and the results attained under their guidance have usually been happy to the community, or otherwise, according as the ruling motives of the leaders have been patriotic or selfish. These results, it is true, are materially affected by the amount of virtue and intelligence among the people; but virtue and intelligence do not, alone, fit an individual for becoming a popular and successful leader in troublesome times. There is necessary, in addition to these, a certain indescribable tact and native energy, which few individuals have possessed, and which, perhaps, no one in our state has manifested in a more eminent degree than Governor Chittenden.

Governor Thomas Chittenden was born

BIOGRAPHY OF GOV. CHITTENDEN.

ADDRESS OF THANKS.

at Guilford, in Connecticut, on the 6th day of January, 1729. At the age of about 20 years, he was married to Miss Elizabeth Meigs, and soon after removed to Salisbury, where, by his industry and economy, he acquired a handsome landed property. While he resided at Salisbury he represented that town seven years in the Connecticut assembly, became a civil magistrate, and a colonel of the militia of that state. Early in the spring of 1774, he removed with his family to the New Hampshire grants, as Vermont was then called, having purchased a tract of land on the Winooski, or Onion river, in the township of Williston. Here he arrived in the month of April or May, not knowing the spot on which he was to locate himself, and without having any habitation provided for the shelter of his family. At this time there were scarcely any inhabitants in Vermont to the northward of Rutland, and none within the limits of the county of Chittenden, excepting those who had come on the present year. These were locating themselves at Burlington, Colchester, and some other places.

Seated upon the beautiful and fertile banks of the Winooski, labor, well directed in the cultivation of his new farm, had procured to Mr. Chittenden the necessary provisions for the comfortable sustenance of his family, and had opened to him the prospect of many of the conveniences of life; and nothing could be more flattering than the prospect of rural wealth, abundance and independence, as the natural and certain consequence of the labor of his hands and the fertility of the soil. It was in the midst of these improvements, and pleasing anticipations, that the war of the Revolution commenced, and the frontier settlements became exposed to the depredations of the enemy—to the merciless inroads of their savage allies. In this state of things, in 1775, Mr. Chittenden was employed, with four others, as a committee to repair to Philadelphia, and procure intelligence with regard to the measures which Congress was pursuing, and to receive advice respecting the political measures proper to be adopted by the people of the New Hampshire grants.

The retreat of the American army from Canada, in the spring of 1776, and the advance of the British upon lake Champlain, rendering it unsafe for the few settlers, scattered along the western border of Vermont, to remain upon their lands, this section of the country was wholly abandoned by the inhabitants, who retired into the southern part of the district, or into Massachusetts and Connecticut. Mr.

Chittenden removed his family to Arlington, in June of this year, was appointed president of the council of safety and soon became a leading man in the consultations of the inhabitants. Entering with deep interest into the controversy with New York respecting the titles of the lands in the New Hampshire grants, and being more acquainted with public business than any of the settlers, in consequence of the offices which he had held in his native state, he was universally regarded as the man most suitable to be placed at the head of their operations. Mr. Chittenden perceived that the general struggle for independence, in which the colonies were now engaged, presented a favorable opportunity for terminating the controversy with New York, by erecting the disputed territory into a new state, and establishing a separate government; and having adopted this decisive plan of sound policy, he steadily pursued it, till he saw the independence of Vermont acknowledged by the neighboring states and by the general government.

He was a member of the first convention of delegates from the several townships, which met at Dorset, September 25, 1776, for the purpose of taking into consideration the expediency of declaring Vermont an independent state, and at the subsequent meeting of the convention at Westminster, January 15, 1777, he was one of the committee who draughted the declaration of independence, which was there adopted, and also a member of another committee, who, at that time, petitioned Congress, praying that body to acknowledge Vermont a free and independent state. He assisted in forming the first constitution of Vermont, which was adopted by the convention, July 2d, 1777, and in 1778 he was elected the first governor of Vermont, which office he held with the exception of one year till his death.* He

* In 1789, there being no election of governor by the people, the council and representatives in joint ballot made choice of Moses Robinson, whereupon a committee was appointed to prepare an address of thanks to Gov. Chittenden for his past services, and on the 17th of October, the following address was adopted by the general assembly.

"To the Hon. Thomas Chittenden, Esquire:—

SIR,—On your exit from the important office of governor, which you have so long held by the united suffrages of the people of this state, the representatives in general assembly met beg leave to address you, and publicly demonstrate the satisfaction they feel in your late administration. The citizens of Vermont must contemplate with pleasure, your early and reiterated endeavors to establish and maintain the existence and welfare of this government—and at the same time feel a grateful sense of the many and good services you have rendered them, as the supporter, guardian and protector of their civil liberties.

The representatives of the people of Vermont,

was one of the eight persons who secretly managed the negotiations with the British in Canada in 1780, and the three following years, with such consummate adroitness and skill as to deceive alike the British and the people of the United States, and effectually to secure Vermont from the hostilities of the enemy, whose forces were all this time in possession of lake Champlain, and Vermont without any other means of defence. After the close of the war, Governor Chittenden again removed his family to Williston, where he spent the remainder of his active and useful life. Advanced in years and declining in health, in the summer of 1797 he resigned the office of governor, which he had held for 18 years, and died the same season, August the 25th, in the 69th year of his age, beloved by his family and friends and sincerely esteemed and lamented by the people of Vermont.

As already remarked, Governor Chittenden possessed in an eminent degree, precisely those qualifications, which fitted him for the sphere in which he was called upon to act. He had not, indeed, enjoyed many of the advantages of education, but his want of education was amply compensated by the possession of a strong and active mind, which at the time he emigrated to Vermont, was matured by age, practised to business, and enriched by a careful observance of men and things. His knowledge was practical rather than theoretic. He was regular in his habits—plain and simple in his manners—averse to ostentation of equipage or dress, and he cared little for the luxuries, the blandishments or the etiquette of refined society. In short, though he was destitute of many of the qualifications now deemed essential in a statesman, he possessed all that were necessary, and none that were superfluous, in the times in which he lived, and was probably far better fitted to be the leader and governor of the independent, dauntless and hardy, but uncultivated settlers of Vermont, than would have been a man of more theoretic knowledge, or polite accomplishments.

upon this occasion, request your Honor to accept, for your past services, all that a noble and generous mind can give, or wish to receive,—*their gratitude and warmest thanks*; and it is their earnest wish that, in your advanced age, and retirement from the arduous task of public life, you may enjoy all the blessings of domestic ease. I am, may it please your Honor, (by order and in behalf of the House,) with the greatest respect, your most obedient, humble servant. Gideon Olin, Speaker."—*Journal of the Legislature for 1789, page 29.*

The next year Mr. Chittenden was elected governor by the people, and continued to hold the office till his resignation, a little before his death, as above stated.

Gov. Chittenden met the legislature of Vermont, for the last time, at the October session in 1796, and the following speech, which is alike characterized by simplicity, sound sense, and a paternal regard for the welfare of the people, was the last which he ever delivered before that body. His advice with regard to the moral character of those who are candidates for office, would not be amiss at the present period.

"Gentlemen of the Council and Assembly:—"

So well known to you are the manifold favors and blessings, bestowed on us as a people, by the Great Ruler of the universe, that it would be unnecessary for me to recapitulate them. I would, therefore, only observe, that, but a few years since, we were without constitution, law, or government;—in a state of anarchy and confusion; at war with a potent foreign power; opposed by a powerful neighboring state; discountenanced by the Congress; distressed by internal dissensions;—all our landed property in imminent danger and without the means of defence.

Now your eyes behold the happy day, when we are in the full and uninterrupted enjoyment of a well regulated government, suited to the situation and genius of the people, acknowledged by all the powers of the earth, supported by the Congress,—at peace with our sister states, among ourselves and with the world.

From whence did these great blessings come? From God. Are they not worth enjoying? They surely are. Does it not become us as a people to improve them, that we may have reason to hope that they may be continued to us and transmitted to posterity? It certainly does.

What are the most likely means, to be taken by us as a people, to obtain this great end?—To be a faithful, virtuous and industrious and moral people. Does it not become us a legislature, to take every method in our power, to encourage virtue, industry, morality, religion and learning?—I think it does. Is there any better method, that can be taken by us, to answer this purpose, than by our own example; and having a sacred regard to virtue, industry, integrity and morality, in all our appointments of executive and judicial officers?

This is the day we have appointed to nominate all our subordinate executive and judicial officers, throughout the state for the present year. The people by free suffrages, have given us the power, and in us they have placed their confidence;—and to God, to them, and to our own consciences we are answerable. Suffer

PARTIES DISTINCTLY FORMED.

MR. TICHENOR ELECTED GOVERNOR.

me then as a father, as a friend, and as a lover of this people, and as one, whose voice cannot be much longer heard here, to instruct you, in all your appointments, to have regard to none but those who maintain a good moral character—men of integrity, and distinguished for wisdom and abilities; in doing this, you will encourage virtue, which is the glory of a nation, and discountenance and discourage vice and profaneness, which are a reproach to any people.”*

SECTION II.

Legislative proceedings in Vermont from the year 1797 to 1812.

The popularity of governor Chittenden and the certainty of his re-election, had hitherto prevented any serious efforts being made to bring forward other candidates for that office. But, by his resignation and death, the political parties in Vermont were relieved from the restraints of his influence, and new motives were laid before them to arouse their activity and exertions. The two great parties had already adopted the terms *federal* and *republican* as the mottos of their respective standards, and from this period no means were left unemployed which were supposed to be calculated to increase their respective influence and numbers.

The republican party were believed to favor the principles of the French revolution, and to be desirous of rendering the government of the Union more democratic, while the federalists were accused of partiality to Great Britain and of a wish to make the government of the United States more independent of the people and monarchical in its principles. The great mass of both these political parties undoubtedly had the good of their country at heart and differed but little in their views of the proper means of promoting it. But, by the influence and arts of designing politicians and demagogues these slight differences were, in time, so magnified and distorted as to produce the most violent animosities among friends and neighbors.

At the meeting of the Vermont assembly in October, 1797, it was found that no governor had been elected by the people, but that Isaac Tichenor, then chief-justice of the state had received the largest number of votes. The choice then devolving upon the general assembly, Mr. Tichenor was elected by a large majority. He entered upon the duties of his office by making a speech to the legisla-

ture, and thus introducing into Vermont the custom of the other states. In his speech he applauded the state and federal constitutions, fully approved of the measures of Washington's administration, and expressed his entire confidence in the abilities and integrity of Mr. Adams, who was then President of the United States. The sentiments of the speech were decidedly the sentiments of the federal party.

To this speech the legislature returned a respectful answer in which they say “we are not disposed to call in question the wisdom or integrity of those, who have been concerned in the administration of the general government, nor to withhold confidence where it ought to be inspired; but give support and energy to every measure, which, in our opinion, will secure, or promote the national prosperity.” The two political parties were distinctly formed, but they had not yet reached that state of insolence and acrimony, which they were afterwards to exhibit, and in the transaction of the public business, the public good was yet obviously paramount to the promotion of party influence and power.

In October, 1798, the legislature met at Vergennes. Mr. Tichenor was re-elected governor by a large majority. The country was now much agitated on account of the insolent and lawless proceedings of the French—their refusal to receive American ambassadors and their demand of tribute under the name of a loan; and the governor, in his speech, expressed the strongest disapprobation of their policy and proceedings. The house returned an answer, imbued with the same spirit of hostility to the French; and both were in the highest tone of what was called *federalism*.

Early in the session a committee was appointed to draw up an address to the President of the United States, which was soon after adopted by a vote of yeas, 129, and nays, 23. In this address the principles and proceedings of the French were treated with much asperity. It expressed the entire confidence of the legislature in the president, and the fullest approbation of the measures of his administration, and declared the willingness of Vermont to take up arms, if necessary, for the defence of the country against the rapacity of the French. To this address, Mr. Adams afterwards returned a very polite and respectful answer, in which he complimented the people of Vermont for their patriotism and virtue, and expressed the high satisfaction derived from the assurance of their approbation.

* Journal of the Gen. Assembly for 1796. p. 98.

It was during this session, that proscription, on account of political opinion, was first practised in the distribution of the civil offices in Vermont. Israel Smith, who had held the office of chief justice of the state, and who was a man of uncorrupted integrity and virtue, was dropped on account of his attachment to the republican party, and another person chosen chief justice in his stead. For all the important offices, the selections were made from those who were of the most decided federal principles, and with the avowed design of encouraging the supporters of Mr. Adams, and of checking the progress of democracy.

After the appointment of the various officers for the current year, the political inflammation subsided, and the assembly proceeded in the remaining business of the session with their usual industry and good sense. It was during this session that application was made by some Indian chiefs in Canada, for compensation for lands which they claimed in Vermont.* Their claim embraced nearly the whole of the present counties of Addison, Chittenden, Franklin and Grand Isle. The subject was referred to a committee, who reported that the lands claimed had, in their opinion, formerly belonged to said Indians, but whether their title had ever been extinguished by purchase, conquest, dereliction of occupancy, or in any other way they could not ascertain. The legislature supported the Indian agents during their attendance, gave them a hundred dollars in token of friendship, and they returned to their tribes well pleased with their present success, and hoping to succeed still better another season.

A proposal came before the legislature at this session from the state of Massachusetts for an amendment of the constitution of the United States, providing that no person, who was not a natural born citizen, or a citizen of the United States at the time of the declaration of independence, should be eligible to the office of president, or vice-president, or of senator or representative in Congress. This proposal was agreeable to the sentiments of the assembly, and was adopted by a vote of 152 yeas, and only five in the negative.

In October, 1799, the legislature met at Windsor. The spirit of opposition to French principles and measures, continued to run high. The speech of governor Tichenor highly applauded the energetic measures of Mr. Adams for putting a stop to the aggressions of the French

upon our commerce, and expressed the fullest approbation of the measures of his administration. The assembly in their answer to this speech, reciprocated the same sentiments, and congratulated His Excellency on account of the prosperity and felicity of the state under his administration. In the appointment of civil officers, the assembly proceeded with more moderation than they had done the preceding year; they did not however see fit to replace those, who had been dropped on account of their attachment to the republican party.

At this session the governor communicated to the assembly the result of his inquiries respecting the claims of the Indians to lands in Vermont; which was, that the said claims, if they ever existed, were fully extinguished by the treaty between France and Great Britain, in 1763, and that subsequently made between Great Britain and the United States in 1783. A resolution to that effect was accordingly adopted by the assembly and communicated to the chiefs of the six nations of Indians inhabiting Lower Canada.* The questions which occasioned the most excitement and debate related to sundry resolutions, which had been passed by the assemblies of Virginia and Kentucky, condemning the proceedings of Congress in passing the alien and sedition laws, and declaring individual states to be the legal judges of the constitutionality of the acts of Congress, and of the obligation of the state to yield obedience to them.

Resolutions were passed by the assembly of Vermont, expressing the most decided disapprobation of the sentiments contained in the resolutions from Virginia and Kentucky. They declared that "it belongs not to *state legislatures* to decide on the constitutionality of the laws, made by the general government, this power being exclusively vested in the judiciary courts of the union." On the passage of these resolutions the yeas were 104, and nays, 52, which clearly shows the strength of the two political parties in Vermont, the federalists all being in favor of their adoption, and the republicans all in the opposition. The minority on this occasion entered a formal protest upon the journals of the assembly, assigning twelve reasons for their dissent from the majority. This protest was signed by thirty-three of those who had voted in the negative.

This year a serious difficulty had arisen between the government of Vermont and

* This application was addressed to the governor and was signed by twenty individuals calling themselves chiefs. It may be found in the Journal of the General Assembly, for 1798, page 103.

* Journal of the General Assembly, for 1798, p. 143.

DIFFICULTY WITH CANADA.

that of Canada, respecting one John Gregg, who had been arrested in Canada by some persons from Vermont, and drowned, while in their custody, in lake Champlain. These persons were indicted before the court at Montreal and the governor of Canada demanded of the governor of Vermont that they should be given up, to be tried for the supposed murder. After considerable correspondence and discussion, the matter was finally adjusted to the satisfaction and credit of both parties; and when the correspondence and result was laid before the Legislature, that body entertained so high a sense of the services of Governor Tichenor on the occasion that they passed a resolution approving of his conduct, and requesting him to inform the governor of Canada that they entertained "a very high sense of the liberal, candid and delicate manner in which that unhappy affair had, from its commencement to its termination, been treated by his predecessor and him.* Their conduct, when our sense thereof is known to our fellow citizens, must tend to increase the general desire for the continuance of a mutual, free, and amicable intercourse with the country over which he presides."†

In October, 1800, the legislature met at Middlebury. The political excitement had apparently much subsided. In his speech, Governor Tichenor urged the attention of the assembly to the particular affairs of the state, but alluded to the administrations of Washington and Adams, in terms of the highest approbation. The answer which the assembly returned was mild, moral and sentimental; expressive of the difficulties of legislation, and the danger of being governed by passion or prejudice. The common business of the state was transacted without the violence of party spirit, and several of the officers who were displaced on account of their republicanism in 1798, were re-appointed.

Another election of president of the United States was soon to take place. It was known that a majority of the Vermont assembly were in favor of the re-election of Mr. Adams; the republican members therefore introduced a bill providing for the choice of electors by districts, thinking that method might prove more favourable to Mr. Jefferson, the republican candidate, than their appointment in the usual way by the council and assembly, or by any general ticket. After a long dis-

EFFECT OF MR. JEFFERSON'S ELECTION.

cussion this bill was finally rejected by a vote of 95 to 73. By this vote it appeared that the republican party had considerably increased during the past year, and that the majority on the side of the federalists amounted to only twenty two.

The Indians having been so well supported and paid at their former attendance upon the legislature, again attended and urged their claims to lands in Vermont. The governor informed them that the assembly had decided that they had no title or just claim to any lands in Vermont—that the assembly had voted to give them \$50 to defray their expenses on their return to their own nations—but that no more money would be given them, either to purchase their claims, or to defray their expenses. These decided measures brought the affair with the Indians to a close. During this session was also passed an act incorporating and establishing a college at Middlebury by a vote of 117 to 51.

The events of 1801, gave a new aspect to political affairs. Mr. Adams lost the election, and after repeated trials, Mr. Jefferson was elected President of the United States, by a majority of one vote. He entered upon the duties of the office on the 4th of March, and in his inaugural address, he disclaimed the principles of political intolerance, urged those of candor and magnanimity, and declared that the difference of political opinions was not a difference of principles. Notwithstanding the apparent diversity of sentiment with regard to the federal constitution and government, "we are," said he, "all federalists, we are all republicans."

By so frank an avowal of his political opinions and intentions, the candid of all parties were led to believe that party factions and animosities were about to come to an end, and that all would now unite in support of the federal government. This was the case in Vermont. But a short time, however, elapsed before the United States attorney and marshal, for the district of Vermont, were removed from office, and their places filled by persons of decided republican sentiments. Similar changes were made in other states, and it was now believed that Mr. Jefferson, notwithstanding his professions, would make his own political sentiments a necessary qualification for office.

In this state of public affairs, the legislature of Vermont met at Newbury in October, 1801. In the House of Representatives, the republican party now had a majority of about twenty, and it was now generally supposed that they would adopt the same course pursued by the federalists in 1798, and make all the ap-

* Gov. Robert Prescott was governor of Canada when Gregg was taken, but was succeeded by Sir Robert S. Millnes before the difficulty was settled.

† See Journal of General Assembly for 1799, p. 64.

ADDRESS TO THE PRESIDENT.

PETITIONS FOR BANKS.

pointments to office from their own political party. But this was not the case. Three new judges were appointed for the supreme court; but they were not selected on account of their political opinions, but on account of their supposed qualifications for the office. In the other appointments, they followed the customary method of regarding the county nominations, and looked rather to the qualifications of the candidate than to his political opinions. The customary business of legislation was pursued with diligence, calmness and impartiality.

In 1798, the federalists had introduced the custom of addressing the President of the United States, and the republican party, having now gained the ascendancy, thought it necessary to imitate the example, by a respectful address to Mr. Jefferson. A committee was appointed, and an address reported, expressive of strong attachment to the constitution, and to the person and political opinions of the President, but containing no reflections upon the former administration. When this address was brought before the house for their adoption, the federalists proposed a trifling alteration in some of the expressions, which the opposite party supposed was designed to prevent any address being made. A debate now arose about words and phrases, which gradually increased in power and violence, till the spirit of party was wrought almost to phrenzy and madness. This debate was continued on three successive days, and ten times were votes taken upon it by yeas and nays. At length, after some slight alterations, the address was finally adopted by a vote of 86 yeas to 59 nays.*

In October, 1802, the legislature met at Burlington, and Mr. Tichenor was found to be re-elected governor by a respectable majority. In his speech, he adverted to the alarming progress of party spirit, and to the dangers to be apprehended from it to our political institutions. The house, as usual, appointed a committee who reported an answer to the speech. This answer was intended not only as an answer to the governor, but a declaration of the sentiments of the house with regard to the present and preceding administrations of the general government. It was written in a peculiar style, abounding in sly insinuations, fulsome adulation, and ambiguous paragraphs. The debate upon this answer was warm and spirited, but it was finally adopted, without alteration, by a vote of 93 to 85. The minority entered upon the journals of the house a

protest against this answer, signed by 59 members.

After this business was disposed of, and to prevent similar occasions of excitement, one of the members gravely introduced a motion to recommend that the governor *should not hereafter make a formal speech*. This motion was, however, decided in the negative, and happily no other business was brought forward which was calculated to arouse the prejudices or inflame the minds of the members. The republican majority was evidently less than it was the preceding year, and did not venture to hazard the adoption of violent or proscriptive measures. The appointments were mostly made from the republican party, but the business of the session was generally managed with prudence and moderation.

In 1803, the legislature met at Westminster. Every part of the country was now agitated by political intrigues and debates. The governor opened the session, as usual, with a speech; but he carefully avoided political questions, and called the attention of the legislature immediately to the business of the state. A committee was appointed, who reported an answer to his excellency's speech, which was adopted without debate, and nothing occurred to call up the feelings of party, till the appointment of civil officers came on. The republicans had a small majority in the house, and they now resolved to employ it in weakening their opponents. Several of the judges were displaced, and men of more approved republican principles appointed in their places, and the work of proscription, on account of political opinions, was now carried farther than it was by the federalists in 1798.

The subject of banks first came before the legislature at this session. Petitions were received from Windsor and Burlington to be allowed to establish banks in those towns; and bills passed the house of representatives granting the privileges prayed for, but they were returned by the governor and council non-concurred in, accompanied by eight reasons against banking, which were entered on the journal.* The matter was then referred to the next session of the legislature. It was expected that proposals would be received from Congress, during this session, to amend the constitution of the United States, so as to oblige the electors to distinguish, on the votes given in, the person intended for president from the one intended for vice president. As it was sup-

* See Journal of the General Assembly for 1801, page 215.

* See Journal of General Assembly, 1803, p. 235. Also article on Banks, Chap. VII.

AMENDMENTS OF THE CONSTITUTION.

KENTUCKY RESOLUTIONS.

posed that the adoption of this amendment would secure the re-election of Mr. Jefferson, the republican members were extremely anxious to act upon it before they adjourned. But, finding that it would require the session to be protracted to an unreasonable length, they decided upon an adjourned meeting, to be held at Windsor, on the last Tuesday of January.

In January, 1804, the legislature met at Windsor, according to adjournment, and the proposed amendment was laid before them. After some debate, the amendment was adopted by the assembly, yeas 93, nays 64. This same question was before the legislature in 1799, and was passed in the affirmative, by a vote of 94 to 42. In this case, all the federalists voted in favor of the proposed alteration, and all the republicans against; but, in 1804, all the republicans were in favor of the amendment, and all the federalists opposed to it. Thus it appears that both parties had totally changed their votes in the course of four years, and that they had either changed their principles, or that they acted without principle.

In October, 1804, the legislature held their annual session at Rutland. At this session, another proposal for amending the constitution of the United States came before the assembly. This originated in Massachusetts, and its object was to apportion the representatives from the several states according to the number of free white inhabitants, to the exclusion of those elected on account of the slaves in any state. The committee, to whom this subject was referred, reported that "the amendment proposed would materially affect that part of the constitution which was the result of a spirit of compromise, and would have a tendency to destroy that union among the states, so essential to our national prosperity," and the proposal was rejected by a vote of 106 to 76. The customary business of the session was transacted with expedition and propriety. Complaint having been made, that the judges of the supreme court had taken illegal fees, a committee was appointed, towards the close of the session, to inquire into the subject. The committee reported the facts, and that in their opinion, fees had been taken agreeably to the fee bill. The house accepted the report, so far as it related to the facts, but not as to the opinion given of the legality of the proceedings of the judges. The legislature then adjourned, leaving the matter in this state of indecision.

In October, 1805, the assembly met at Danville. The governor's speech related principally to the internal affairs of the

state, and, neither that, nor the answer, which was returned by the assembly, was calculated to arouse party feelings, or afford subjects of controversy. The complaint against the judges for taking illegal fees was again taken up, and occupied the assembly for several days, and gave rise to much warm debate. It was, however, finally "*Resolved*, That it is the sense of this house, that the fees taken by the judges of the supreme court were taken with upright views, and that no further order ought to be taken on the subject." This resolution was passed by a vote of 100 to 82.

At this session, two more proposals for amending the constitution of the United States came before the legislature. One from North Carolina, having for its object to empower Congress to pass a law to prevent the further importation of slaves into the United States; and the other from Kentucky, the object of which was to diminish the powers of the United States courts. The former proposal was adopted by the assembly without debate or opposition, and the latter was referred to the next session of the legislature. An act was passed at this session, empowering the governor to take measures for ascertaining the true north line of the state, and another act fixing upon Montpelier as the permanent seat of the government of the state, from and after the year 1808.

The next session of the legislature was held at Middlebury, in October, 1806. Mr. Tichenor was again re-elected governor by a respectable majority, notwithstanding the efforts made by the republican party to prevent it. His opponents, however, had a considerable majority in the assembly, and in their answer to the governor's speech, they did not attempt to conceal their hostility to the measures which he had recommended. When the resolutions from Kentucky, which had been laid over by the former assembly, came up, the house resolved itself into a committee of the whole, and after some debate, adopted the proposed amendment by a vote of 148 to 34; thus manifesting their desire to increase their own powers by diminishing those of the general government. It being reported that Mr. Jefferson intended to retire to private life at the close of his first term of office, the assembly drew up a respectful address to him, which was intended to induce him to become a candidate for re-election. An act was also passed at this session establishing a state bank, consisting of two branches, one at Woodstock, and the other at Middlebury.*

* See article on Banks, Chap. VII.

STATE PRISON ESTABLISHED.

In October, 1807, the legislature met at Woodstock, and, on counting the votes, Israel Smith, the republican candidate, was found to be elected governor in opposition to Mr. Tichenor. In his speech, the governor confined his remarks to the internal affairs of the state, and particularly suggested such alterations in the criminal jurisprudence of the state, as to substitute confinement to hard labor in the place of corporal punishment. In conformity to these suggestions, an act was passed during the session establishing a state penitentiary at Windsor, and making the necessary appropriations for carrying it into effect.

The legislature assembled for the first time at Montpelier, the established capital of the state, in October, 1809. Mr. Tichenor was elected governor, in opposition to Mr. Smith, who had held the office the preceding year. In his speech, he expressed a decided disapprobation of the leading measures of Mr. Jefferson's administration. The republicans having a majority in the assembly, returned an answer, in which they expressed the fullest confidence in the president, and a hearty approval of his measures. No subject of uncommon interest was brought forward at this session, and the ordinary business was disposed of in the usual manner.

In 1809, the republican party succeeded in electing Jonas Galusha governor, in opposition to Mr. Tichenor, who had filled that office with fidelity for eleven years. The governor's speech, and the reply to it by the assembly, were expressive of the political opinions entertained by the republican party generally throughout the union. At this session, an address was adopted, congratulating James Madison upon his elevation to the presidency. A proposed amendment to the federal constitution, from Virginia, also came before the assembly, the object of which was to enable state legislatures to remove their senators in Congress from office, when they should deem it expedient. The amendment was, however, rejected by a majority of the house.

In 1810, Mr. Galusha was re-elected governor of the state, and the republican party had a decided majority in the general assembly. Though the spirit of party was running high, the governor's speech and the answer to it were in a conciliatory tone, and the usual business of the session was transacted with due regard to the public good. An act was passed, making the bills of the Vermont state bank a lawful tender in payment of all land taxes granted at that session of the legislature.

GREAT FRESHET.

Israel Smith, the fourth governor of Vermont, died this year, at Rutland. He settled in this state at an early period, in the practice of law, and soon rose to eminence in his profession. In 1797, he was elected chief justice of the supreme court of Vermont; in 1801, was chosen representative in Congress; in 1803, senator in Congress, and in 1807 governor of the state. He was a man of the purest morals, the strictest integrity, and filled all the stations he occupied honorably to himself, and usefully to the public.

The year 1811 was distinguished by one of the most remarkable freshets known in Vermont. It occurred on the 22d of July. Dark clouds came over from the south-west, and the rain soon began to descend in such torrents that every rill was swelled into the magnitude of a river, and foaming cataracts were formed where ordinarily no water was to be seen. The deluge of water rushed onward with such impetuosity that hardly any thing could withstand its force. The heaviest part of the storm descended upon the counties of Rutland and Windsor, in which counties probably two-thirds of the mills and bridges were swept away, and immense other damage done by the destruction of buildings, fences, crops, &c. The effects of that freshet are visible at this time, after a lapse of 30 years.*

Jonas Galusha, who was again elected governor, opened his speech to the legislature by the following candid remark: "When we realize the greatness of the trust reposed in us by so many thousands of our fellow citizens, to direct, as their faithful representatives, the affairs of the state, in which the happiness of each individual claims equal regard, and the rights of all claim the same protection and support, we shall feel it our indispensable duty to lay aside all party prejudices, and suffer ourselves to be actuated by no other motives than those which coincide with individual justice, and the greatest general good." The same sentiment was reciprocated in the beginning of the answer to the speech, but was lost sight of in the subsequent part, and a liberal share of obloquy cast upon the federalists. This year another proposal for amending the constitution of the United States came before the assembly. This amendment

* The author well remembers this storm, and he well recollects its effect upon a small brook which ran near his father's house, in Bridgewater in the county of Windsor. This stream, which would ordinarily run through an orifice 3 inches in diameter, was so much swollen as to be from one to two rods wide; and, along the middle of the channel, from 4 to 5 feet deep, running at the same time with great rapidity.

WAR WITH GREAT BRITAIN.

MR. RICH'S RESOLUTION.

declared that any citizen, who should accept any title of nobility or honor, or any pension or emolument, from any foreign power, without the consent of Congress, should cease to be a citizen of the United States. This amendment the assembly agreed to recommend by a unanimous vote. The year 1812 is memorable on account of the declaration of war by the United States against Great Britain. We shall not attempt to give the particulars of this war, and still it will probably be expected that we should at least give a sketch of the transactions within our own borders, and in which our own citizens were more particularly concerned; and this we shall endeavor to do in the following section.

SECTION III.

Legislative proceedings from 1812 to 1815
—War with Great Britain—Events on
Lake Champlain—Battle at Plattsburgh.

Our limits will by no means permit us to investigate the causes by which the United States were led to engage in the second war with Great Britain, nor to mention any of the events of that war, excepting such as transpired in our immediate vicinity. Causes of complaint had existed for several years, which, as early as 1809, led to the passage of a law by Congress, interdicting all commercial intercourse with Great Britain. On the 3d of April, 1812, Congress laid an embargo upon all the shipping within the jurisdiction of the United States for 90 days, and on the 18th of June following, an act was passed declaring war with Great Britain. On the passage of this act the vote stood as follows; in the house of representatives yeas 79, nays 49, and in the senate yeas 19, nays 13. The principal causes which led to the adoption of this measure were declared to be "the impressment of American seamen by the British—the plundering of American commerce, and the British orders in council."

In October, 1812, the legislature of Vermont assembled at Montpelier. In his speech, Governor Galusha urged the assembly to second the measures of the general government—provide the means for the defence of our own citizens, and for sustaining our national rights and honor. The assembly returned an answer fully concurring in the sentiments of the governor; but thinking the exigencies of the times demanded a more explicit avowal, Mr. Rich introduced the following resolution:

"Resolved, That the constituted author-

ities of our country having declared war between the United States and Great Britain and her dependencies, it is our duty, as citizens, to support the measure, otherwise we shall identify ourselves with the enemy, with no other distinction than that of locality. We, therefore, pledge ourselves to each other, and to our government, that with our individual exertions, our examples, and influence, we will support our government and country in the present contest; and rely on the Great Arbiter of events for a favorable result."

This resolution was discussed for several days, and with much warmth, and various attempts were made by the federalists to modify it, by striking out or altering the part in italic, but without success, and it was finally passed in its original form, by a vote of 128 to 79. But the minority were not silent. They entered their protest upon the journals of the house, in which they acknowledge themselves under the most sacred obligation to yield a prompt and faithful obedience to every law of Congress, and to support with their lives all that is dear to freemen, the independence of their country; yet they declare the resolution to be subversive of the true principles of a republican government. They likewise expressed their disapprobation of the leading measures of the national administration, and pronounced the declaration of war to be premature and impolitic. The majority, however, proceeded to act up to the spirit of their resolve, and passed a law prohibiting all intercourse between the people of Vermont and Canada, without a permit from the governor, under a penalty of \$1000 fine, and seven years confinement at hard labor in the state's prison. They also passed an act exempting the persons and property of the militia, while in actual service, from attachment; an act, laying a tax of one cent per acre on the lands in the state, in addition to the usual assessments, and other acts relating to the detaching and paying of the militia.

These legislative regulations proving oppressive to the people, many of the supporters of the war abandoned the republican ranks, and went over to the opposition. As the elections in 1813 approached, both parties exerted to the utmost every means in their power, the one to gain and the other to preserve the ascendancy. When the assembly came together in October, it was found that neither candidate for governor had been elected by the people. On attempting a choice by the assembly, they were found to be

divided into two parties exactly equal. After much manœuvring and several trials, Martin Chittenden, the federal candidate, was elected by a small majority. The sentiments of the governor's speech, and of the answer to it, were in the highest tone of federalism, and consequently in direct opposition to the war and the measures of the general government. The minority, 75 in number, however, protested against these sentiments, and entered their reasons upon the journals of the house.

The federalists having now the ascendancy, nearly all the appointments to office were made from that party: after which the legislature proceeded to repeal the several laws before mentioned, which had been enacted the preceding year. The spirit of party was now wrought up to the highest pitch, and the parties did not hesitate to brand each other with the opprobrious names of tories, traitors, and enemies to their country. The enmity was such as to destroy the harmony and intercourse of families and neighbors, and at times they seemed to be on the eve of proceeding to open hostilities.

The smuggling business led to frequent encounters between the smugglers and custom-house officers, during the war and the non-intercourse which preceded it, in some of which blood was shed and lives lost. The first serious affray of this kind took place on Winooski river, at Burlington, in 1808, between a party in the employ of the custom department and a smuggling vessel called the Black Snake. In this encounter, two men were killed by the smugglers. The smugglers were, however, taken and tried by a special court at Burlington. Dean, one of them, was executed, and the others, excepting Day who was discharged, were sentenced to the state prison. Franklin county was the scene of frequent skirmishes. The smugglers usually travelled in the night, and went in so large companies and so well armed, as to make it very dangerous business for the custom-house officers to interrupt them. Similar disturbances were common all along our northern frontier.

About the first of September, 1813, Mr. Samuel Beach, of Canaan, in the north-east corner of the state, had a permit from the governor to go into Canada to repair a mill-dam. He sent forward his workmen with a team, which was taken from them by John Dennett and others, and driven back. Beach, in attempting to recover his team, was fired upon by Dennett and killed. Dennett and his associates were taken and confined in jail, from

which he escaped in January following to the neighboring forests, where he continued till the next August, when he was retaken, but not till after he was mortally wounded by his pursuers. It appeared that Dennett resisted, and was shot while attempting to kill Mr. Morgan, by a Mr. Sperry, another of the pursuers.

In the summer of 1812, some preparations were made on lake Champlain, to oppose the naval force of the British. Nothing, however, occurred on the lake worthy of notice till the 2d of June 1813. On that day the Growler and Eagle sailed from Plattsburg under the command of Lieut. Smith in pursuit of some British gun-boats which had made their appearance on the lake. On the following morning, when near the Canada line, they were led, in pursuit of the boats, into shoal water near the shore, where the Eagle grounded and became unmanageable, and, after four hours hard fighting, the Growler was obliged to surrender to the British. On the 30th of July, a detachment of the British, about 1400 strong, landed at Plattsburgh, where they destroyed the American barracks, estimated to be worth \$25,000, and much other property, both public and private. The public stores having been previously removed to Burlington, the enemy proceeded thither and fired a few shot upon the town, but, as soon as the cannon began to play upon them from the shore, they retired.

On the 20th of August, the Americans had equipped a naval force upon lake Champlain, consisting of the President, carrying 12 guns, Com. Preble 11, Montgomery, 11, Frances, 6, and two gun-boats and six scows, carrying one gun each, making in the whole 48 guns. With this force Com. Macdonough sailed from Burlington to the line in September, and offered battle to the enemy, but they declined and retired into Canada. The northern army was assembled at Burlington under the command of Gen. Hampton and consisted of about 4000 men. Early in September this army was embarked at Burlington, and landed at Cumberland Head, near Plattsburgh. On the 9th, they proceeded to Chazy, and attacked the enemy's advanced post at Odletown.

Finding it impracticable to make his way into Canada by that route, Hampton returned to Champlain, and took the route to Chateaugay, where he arrived on the 25th. Col. Clark was in the mean time detached, and ordered to attack a small British force at St. Armand, on Missisco Bay. He found the enemy drawn up under Major Powel, but wholly unex-

NAVAL FORCES ON LAKE CHAMPLAIN.

BATTLE AT PLATTSBURGH.

pecting an attack by land, and, after an action of ten minutes, they surrendered themselves prisoners of war. The American force engaged was 102, and the number of prisoners taken and sent to Burlington, was 101. Nine of the enemy were killed, and 14 wounded. The army under Gen. Hampton engaged with the enemy at Chateaugay, on the 26th of October, but being unsuccessful, and the season far advanced, he soon after returned into winter quarters, at Plattsburgh.

A brigade of Vermont militia, which had been drafted into the service of the United States, and marched to Plattsburgh, were on the 10th of November, discharged from service by a proclamation of Gov. Chittenden, and ordered to return home. To this order the officers of said brigade, refused obedience, and returned a written protest against it. The militia, however, returned before their time of service was expired, and no further notice was taken of the transaction. Commodore Macdonough went into winter quarters at Otter Creek, with his flotilla, on the 19th of December. Thus terminated the northern campaign, for 1813.

In the spring of 1814, the northern army, having been placed under General Wilkinson, advanced from Plattsburgh along the west side of the lake, and entered Canada. After an unsuccessful attack upon the stone mills at Lacole, and some other skirmishes, in which the Americans lost about 100 men in killed and wounded, they found it necessary to retreat. In the mean time Commodore Macdonough was making every effort to get in readiness in Otter Creek, a sufficient naval force to match that of the enemy upon the lake. On the 14th of May, the enemy's fleet, consisting of a brig, 3 sloops, and 13 galleys, passed up the lake, and opened a spirited fire upon the battery, at the mouth of Otter Creek, with a view of forcing their way up the creek and destroying the American shipping before it should be ready for service. But in this they were unsuccessful. They were repulsed by the garrison, and the Vermont militia, and soon after returned to the northward.

About the last of May, Commodore Macdonough entered the lake with his flotilla and proceeded to Plattsburgh, and afterwards advanced nearer the line, but nothing of consequence occurred on the lake till the latter part of the season. About the first of September, Governor Prevost entered the territory of the United States, at the head of 14,000 men and advanced towards Plattsburgh, which was garrisoned by only one brigade, under

General Macomb; the main northern army having marched to the westward. On the 7th of September, the enemy appeared before Plattsburgh, and were employed in getting on their battering train, erecting batteries, and in skirmishes with the Americans, but did not make a general assault till the arrival of their flotilla.

In the mean time every effort was made to call in the neighboring militia. Expresses were sent into Vermont, and the Green Mountain Boys, without distinction of party, shouldered their guns and hastened forward to repel the invasion; and in the part which they took in the subsequent conflict, they nobly sustained their high character for firmness and bravery. The American land force, however, continued much inferior to that of the British. The British force upon the lake was also superior to the American. It was commanded by Commodore Downie, and consisted of a frigate of 39 guns, a brig of 16, two sloops of 11 guns each, and 13 gun-boats, carrying 18 guns, amounting in the whole to 95 guns, and manned by 1050 men. The American force under Commodore Macdonough, consisted of the Saratoga, of 26 guns, the Eagle, of 20, Ticonderoga, of 17, the Preble, of 7, and 10 gun-boats, carrying 16 guns, amounting in the whole to 86, and manned by 820 men.

As it was generally understood to be the intention of the British to make an attack both by land and water, at the same time, Com. Macdonough determined to await the approach of the enemy's squadron, at anchor in Plattsburgh Bay. Early in the morning of the 11th of September, the lookout boat announced the approach of the enemy, and about 9 o'clock, they anchored in a line about 300 yards from the American squadron. In this situation the whole force on both sides became engaged. The conflict was exceedingly obstinate; the enemy fought with great bravery, but the superiority of the American gunnery prevailed over the enemy's superior force. After an action of two hours and 20 minutes, the fire of the enemy was silenced, and her frigate, brig and two sloops were surrendered to the Americans. Some of their galleys were sunk, and the others made their escape. The British lost in this action, 84 killed and, 116 wounded. Among the killed were Commodore Downie, and three lieutenants. The American loss was 52 killed, and 58 wounded. Among the former were lieutenants, Gamble and Stansbury.

The commencement of the naval action seemed to be the signal for a general

RESULT OF THE ENGAGEMENT.

assault by land. The enemy opened their batteries upon the American works, and at the same time attempted to cross the Saranac, and gain the rear of the Americans. The Americans kept up a destructive fire from their forts, and met the enemy at every point with the most determined bravery. As soon as it was known that their fleet had surrendered, the enemy relinquished all their hopes, and began making arrangements for a retreat. During the afternoon and night, all the enemy's forces were withdrawn, and they retired with such precipitation, and were so closely pursued by the Americans, that they were obliged to leave behind their wounded, and large quantities of provisions, ammunition and military stores. The whole loss of the enemy upon land, in killed, wounded, prisoners and deserters, exceeded 2,500 men. The aggregate loss of the Americans, did not exceed 150.

After the battle of Plattsburgh, nothing further occurred upon lake Champlain worthy of notice during the war. The legislature of Vermont assembled as usual in October, and it again appeared that no governor had been elected by the suffrages of the people. The legislature then proceeded to the choice of a governor, and Martin Chittenden, was elected by a majority of 29 votes. Much complaint having been made because the governor did not order out the militia for the defence of Plattsburgh, instead of calling upon them as volunteers, he adverted to that subject in his speech, by saying, that, as no portion of our militia had been detached by the President for the service of the United States, a call upon our patriotic citizens for their voluntary services was, in this case, considered to be the only mode by which efficient and timely aid could be afforded.

He spoke in the highest terms of the officers and men employed in repelling the enemy and in teaching them the "mortifying lesson, that the soil of freedom will not bear the tread of hostile feet with impunity;" and declared their "achievements were not surpassed in the records of naval and military warfare." But while he acknowledged with gratitude, the interposition of Providence for preventing the designs of the enemy and saving our borders from the desolations of war, he declared that his opinion of the propriety of the war remained unaltered—that he "conscientiously disapproved of it as unnecessary, unwise and hopeless in all its offensive operations." To this speech the house returned a dignified and respectful answer, reciprocating the sen-

VOTE OF THANKS TO THE OFFICERS.

timents of his excellency with regard to the transactions at Plattsburgh, and pledging to him their cordial co-operation in measures calculated to promote the public good.*

When this answer was reported to the assembly, attempts were made by some of the leading members of the republican party to substitute another, containing reflections discreditable to the governor and the party in power,† and when these failed they entered a solemn protest against the sentiments contained in it, upon the journals of the assembly.‡

The correspondence between governor Chittenden, James Monroe, secretary of state of the United States, and Generals Macomb, Strong and Newell, in relation to the Vermont militia and the transactions at Plattsburgh were laid before the assembly and published in the journals.§

At this session a resolution was adopted expressing the thanks of the legislature to General Macomb and his companions in arms—to General Strong and the patriotic volunteers from Vermont under his command, and to Commodore Macdonough and the officers and crew of his squadron, in testimony of their high sense of their bravery and good conduct on the memorable 11th of September, 1814, by which the enemy were repulsed by land, and their squadron captured upon the lake. In further consideration of his services, the legislature passed an act granting to Commodore Macdonough a farm belonging to Vermont, and lying upon Cumberland head, and in full view of the late naval engagement in which he had acquired so much honor. A communication was received during this session from the legislature of Massachusetts inviting Vermont to appoint delegates to meet delegates from the other New England States at Hartford, Connecticut, to take into consideration the state of the Union. But by a vote of the assembly this invitation was unanimously declined.

From this period the violence of party spirit in Vermont began rapidly to abate. The invasion of our territory by the fleets of the enemy had united the feelings of parties in the common defence, and many, who were at first opposed to the war, were now convinced that the good of their country demanded the united efforts of all our citizens in prosecuting it to an honorable and successful termination. On the 24th of December, 1814, a treaty of peace was signed at Ghent between Great Britain and America by their res-

* Journals for 1814, p. 44.

† Journals for 1814, p. 108. ‡Ib. p. 172. §Ib. p. 68.

SAMUEL E. GODFREY.

COLD SEASON.

GOV. GALUSHA.

pective plenipotentiaries. The tumults of war now ceased—the gloom which overhung our land was dispersed, and all were rejoiced to see our soldiers re-converted into citizens—our implements of war into instruments of husbandry, and to hear the peaceful hum of business instead of the roar of cannon and the trumpet of war.

SECTION IV.

Legislative proceedings from 1814 to the close of the year 1841.

Before the meeting of the assembly in 1815, peace had been restored to the country and many of the causes which had agitated the community had disappeared. The republican party had now gained the ascendancy in the state, and Mr. Galusha was again elected governor by the people, by a handsome majority. The governor's speech contained nothing to revive the violence of party. He alluded to the storm of war which had just passed over their heads and was now succeeded by the calm and sunshine of peace, and then invited the attention of the legislature to the immediate business of the state. Among the acts passed at this session was one granting to a company the exclusive right of navigating lake Champlain by steam for 23 years. This act met with much opposition in the house, and was passed by a vote of 91 to 70. It was afterwards found to be unconstitutional and void.

The case of Samuel E. Godfrey, who had been convicted of the murder of Mr. Hewlet, in the State prison and was sentenced to be hung at Woodstock, was brought before the legislature for a reprieve, or commutation of punishment, and occupied much time, but with no other result than the postponement of his execution for a few months. This was the second execution of the kind, under the government of the state.

The spring and summer of 1816, were remarkably cold. Snow fell to the depth of several inches in all parts of Vermont on the 8th of June, and from the general failure of the crops there was an uncommon scarcity of provisions. Mr. Galusha was this year re-elected governor, and, in his speech, he called the attention of the legislature to the encouragement of manufactures. The customary answer to his excellency's speech this year gave rise to a spirited debate, in which the federal party were treated with great asperity, on account of the vote of the representatives in Congress, from Vermont, who were

federalists, by which the pay of the representatives was increased contrary to the wishes of the freemen of Vermont. With this session terminated the practice of returning an answer to the governor's speech, which had, from the first election of Mr. Tichenor in 1797, every year consumed much time, and often given rise to the most violent contentions.*

At the three following elections in 1817, 1818, and 1819, Mr. Galusha was successively chosen governor of the state, and nothing occurred to excite the violence of party, or to interrupt the general prosperity. Bountiful harvests rewarded the toil of the husbandman, and the blessings arising from the diffusion of knowledge, the success of the mechanic arts, and the influence of good government were generally diffused. In 1817, the president of the United States, Mr. Monroe, in his tour through the middle and eastern states, passed through Vermont, and every where received the respect due to his dignified office, and the gratitude merited by a life devoted to the service of his country.

In 1819, the usual business of the legislature was transacted with unanimity, and, among other things, a resolution was adopted approving in the highest terms of the measures and objects of the American Colonization Society. Mr. Galusha having signified his intention to retire from public life, the house adopted a respectful address to him on the occasion, in which they say that, "on a review of the events of the memorable struggle of our fathers for independence, we find you in early life on the banks of the Walloomscoik, with your patriotic band teaching them boldly to defend their country. In discharging the duties of councillor, judge and governor, you have ever merited and received the approbation of your fellow citizens."

In 1820, Richard Skinner, formerly chief justice of the state, was elected governor. In his speech, he presented a clear view of the evils resulting from the frequent alterations in the public statutes, and he expressed as his opinion, that the present organization of the Vermont judiciary, was calculated for the despatch of business and to prevent the multiplication of lawsuits. At this session a resolution was passed remonstrating against the admission of Missouri into the union with a constitution legalizing slavery, and the cruel and unnatural traffic in hu-

*At the commencement of the session in 1817, the question—Shall there be a committee raised to report an answer to the governor's speech?—was decided in the negative—yeas 77, nays 109.

man blood, and instructing their senators and representatives in Congress, to exert their influence and use all legal measures to prevent it.

In 1821, Mr. Skinner was again elected governor. In his speech, the governor informed the assembly that he had received communications from Maryland and New Hampshire, respecting the appropriation of the public lands belonging to the United States, to the several states for the benefit of education, and said that the people of Vermont "could feel no delicacy in making a claim of this kind, for no one of the United States, in proportion to their ability, contributed more to the acquisition of those rights, which were purchased by the toil, distresses and sacrifices of the revolutionary war. Situated on the frontier, they constituted the barrier between the enemy and the confederated states. Not having been acknowledged as a member of the confederation, no part of the expense they incurred in the war has been assumed by the general government, while they have participated in the burden of the public debt." In conformity with these suggestions, resolutions were passed declaring the right of each of the states to a participation in the benefits of the public lands and requesting our delegation in Congress to use their endeavors to procure the passage of an act appropriating to the use of the state of Vermont, for the purposes of education, such portion of the public lands as should be equitable and just.

Mr. Skinner was again elected governor in 1822. In his speech he called the attention of the legislature particularly to the subject of manufactures. The committee on manufactures to whom this part of his excellency's speech was referred, made a report, in which they say, "Vermont can raise as fine wool as any quarter of the globe, and her mountains roll down their thousand streams to aid us in its manufacture. It also abounds in ores, and minerals, and forests upon which the industry and ingenuity of our citizens might operate with great advantage, could sufficient capital be allured to these objects by the patronage of our laws." In compliance with a recommendation of the governor an act was passed declaring all contracts void where interest should be taken, or secured, at a higher rate than six per cent. per annum.

Mr. Skinner having signified his wish no longer to be considered a candidate for the office of governor, at the meeting of the legislature in 1823, Mr. Van Ness was found to be elected in his stead. In his speech he invited the attention of the

legislature to the immediate concerns of the state, but was not sensible that any material alteration in the laws were at that time demanded. He discouraged all change which was not particularly necessary, as producing uncertainty in law, and thereby occasioning perplexing and expensive law suits. An act was passed at this session prohibiting horse-racing, under a penalty of the forfeiture of the horses and money staked; but few alterations were made in the existing laws.

In 1824 Mr. Van Ness was re-elected governor without opposition. In compliance with the recommendation of the governor, an act was passed at this session, giving the choice of electors of president and vice president to the people by a general ticket. General La Fayette having arrived in this country on the 17th of August, a committee of the legislature reported that "as a nation we owed to him a debt of gratitude, and that Vermont, in common with her sister states, would rejoice in an opportunity of manifesting it." A resolution was accordingly passed requesting the governor, in behalf of the people of this state, to invite General La Fayette to extend his tour into Vermont, and honor its citizens with his presence. On the 28th of June 1825, La Fayette entered Vermont for the first time at Windsor, where he was joyfully received by the governor, and a numerous body of citizens assembled to welcome the early benefactor of their country. From Windsor he proceeded by the way of Montpelier to Burlington, and was every where received with the warmest affection and gratitude, and with the most enthusiastic demonstrations of admiration and applause.

Mr. Van Ness was again chosen governor in 1825, and in his communication to the assembly he invited their attention particularly to the subject of internal improvements. A board of canal commissioners was appointed and five hundred dollars were appropriated to defray their expenses. It was made the duty of these commissioners to assist any engineers, who might be employed by the general government to ascertain the most practicable routes for canals within this state. The great objects contemplated were, the improvement of the navigation of Connecticut river and the connexion of that river with lake Champlain and lake Memphremagog by means of canals. The law setting forth the principles upon which the grand list for the assessment of taxes in this state, should be made out, was repealed at this session, and a new law upon this subject enacted. By this act it was

PLAN OF EDUCATION.

ORIGIN OF ANTI-MASONRY.

provided that there should be an appraisal of real estate once in five years and that it should be set in the list at the rate of four per cent for buildings and village lots, and six per cent for other real estate, on its appraised value, and to this the rates of personal property are calculated to correspond.

Mr Van Ness having signified his wish no longer to receive the suffrages of his fellow citizens, Mr. Butler was, in 1826, elected governor of the state. In his speech he called the attention of the assembly to the subject of lotteries and the sale of lottery tickets in this state; in consideration of which, an act was passed, prohibiting the sale of lottery tickets without a licence under the penalty of a heavy fine. Mr. Butler was again elected governor in 1827. He now invited the attention of the legislature to the existing laws on the subject of education, and recommended the appointment, in each town or county, of commissioners for the examination of teachers and for the general superintendence of schools. In consequence of these suggestions, a general plan of education was adopted, designed for the improvement of schools, and for producing uniformity in the methods of instruction. It provided that a superintending committee should be appointed annually in each town, and that no teachers should be employed in the public schools, who had not been examined by said committee, and who had not received from them a certificate of their qualifications for teaching. It also provided for the appointment of five school commissioners, whose business it should be to have a general supervision of the business of education in the state, procure and circulate information on the subject, recommend suitable books to be used in schools, ascertain if any alteration in the law be necessary, and make an annual report to the legislature.

In 1828, Mr. Crafts was elected governor. In his speech he congratulated his fellow citizens upon the unrivalled prosperity of the country—declared their advance in population and resources to be unprecedented in the history of man—and the means of happiness within their power to be more abundant than ever fell to the lot of any other people. The legislature this year passed a resolution requiring their senators and representatives in Congress to use all justifiable means to procure the passage of an act granting pensions to all American citizens, without regard to their present circumstances, who served during the war of the revolution.

In 1829, Mr. Crafts was again chosen governor by the votes of the freemen. Among the subjects which came before the assembly was a resolution of the legislature of South Carolina, declaring that Congress had no constitutional power to lay duties on imports for the encouragement of domestic manufactures, or for internal improvements; and also communications from Georgia, Virginia and Missouri, sanctioning the same principles. The legislature disposed of this matter by resolving that they would not concur with the South Carolina resolution.

As already observed, on the return of peace in 1815, party spirit rapidly subsided, and for several years a remarkable unanimity of sentiment with regard to men and measures prevailed. After the election of Mr. Adams to the presidency, in 1825, an organized opposition was formed to his administration by the friends of the rival candidates, who succeeded in 1829, in elevating General Jackson to that office, in opposition to the incumbent. These two great divisions of the people were founded chiefly in a preference of particular men, and not in a difference of political principles. The abduction of William Morgan, in 1826, for divulging the secrets of masonry, gave rise to another party, founded in opposition to the principles of masonry, and which is hence called the anti-masonic party. And thinking it to be the most effectual way to put down an institution which they believed to be dangerous to the community, they made it a part of their political creed that no adhering mason should receive their support for office. This party was not distinctly organized in Vermont till the year 1829.

The year 1830 was distinguished for an unusual quantity of rain, and the month of July, of this year, for one of the most general and destructive freshets ever known in the state. By this freshet many lives were lost, and property, consisting of mills, bridges, buildings and crops, was destroyed, almost beyond calculation.*

When the legislature came together in October, it was found that three candidates for governor had been supported, and that no election had been made by the people. Mr. Crafts, the national republican and masonic candidate, received 13,486 votes; Mr. Palmer, the anti-masonic candidate, had 10,925, and Mr. Meech, the administration candidate, had 6,285. The choice devolving upon the

* Some account of this freshet may be seen in part first, Chap. L., and in part third, article New Haven.

legislature, after 32 ballotings, Mr. Crafts was elected, by a small majority. The abolition of imprisonment for debt had in former years frequently engaged the attention of the legislature, and, in his speech, the governor again invited attention to the subject. After much debate, a law was passed declaring that on all judgments obtained upon debts contracted after the 1st day of January, 1831, the debtor may, within two hours after the rendition of such judgment, before a court of justice, submit himself to an examination on oath by such court or creditor, or his attorney, touching his situation, circumstances, or property, and may be entitled to the benefit of the oath, which shall be administered to such debtor by said court of justice, and a record made thereof, and no execution shall be issued thereon.

In 1831, each of the three parties supported its candidate for governor, in consequence of which, no election was made by the people. The choice again devolving upon the legislature, Mr. Palmer, the antimasonic candidate, was elected at the ninth balloting by a majority of one vote. In his speech he says that "the general condition of our country is that of peace, prosperity and happiness. Compared with any other people, we have the most abundant cause for grateful acknowledgement to the Author of all good, that our lot has been cast here." After making the customary appointments of civil officers, the house proceeded with diligence in discharge of their remaining duties. Few subjects of general interest were brought up, and most of the acts, passed this session, were of a local or private nature. Among the bills passed, was one taxing foreign bank stock, one incorporating the Bennington and Brattleborough rail road company, and one incorporating the Rutland and Whitehall rail road company. Several new banks were also granted.

In 1832, there was again no election of governor by the people, and at the 43d balloting, Mr. Palmer was re-elected by the general assembly. In his message, after adverting to our obligations of gratitude to God on account of our exemption from the direful ravages of the *cholera*, which had been experienced during the year by the neighboring states and provinces; he called the attention of the legislature, among other things, to the subject of the tariff, the United States Bank, &c. In compliance with these suggestions, a series of resolutions were adopted requesting our delegation in Congress to oppose a reduction of the tariff, to aid in procuring appropriations for internal improve-

ments, to use their influence to procure the recharter of the United States Bank, and to prevent encroachments upon the authority of the supreme court of the United States. An act was also passed providing for the erection of a new state house in Montpelier, by a vote of 115 to 83; and \$30,000 were appropriated for that purpose,—the people of Montpelier having pledged themselves to pay one half of that sum into the treasury of the state.

When the legislature came together in 1833, William A. Palmer was found to be elected governor by the people. Nothing of unusual interest came before that body. Resolutions were passed, expressive of the gratitude of the legislature to the authorities of Lower Canada, for their efficient efforts in breaking up a combination of counterfeiters and forgers on our northern borders and also appointing commissioners to confer with commissioners on the part of Lower Canada, in relation to alleged obstructions in the outlet of lake Champlain, in consequence of which some of our citizens were supposed to be injured by the raising of the waters of the lake. But the subject which produced most discussion at this session was the traffic in ardent spirits. Sundry petitions and memorials having been received, they were referred to a select committee of one member from each county. This committee reported a general bill in relation to retailers of spirituous liquors, directing the mode of obtaining licenses and regulating houses of public entertainment, which was finally passed, and the previous laws on this subject repealed.

In 1834, the people having again failed in the choice of a governor, Mr. Palmer was re-elected by the general assembly. In his message, he thus expresses his opinion in relation to a United States Bank: "That a national bank, with proper powers and restrictions, is both necessary and constitutional, I do not doubt. I deem, however, the charter of the present bank exceptionable in several of its provisions, and am opposed to its renewal in its present form." The committee, to which this portion of the governor's message and other matters in relation to the proceedings of the general government were referred, reported: "That a national bank, with powers properly limited and restricted, is essential, if not indispensable, as a fiscal agent, as well as necessary to sustain a sound and uniform currency, and give the requisite facilities to trade, commerce, and manufactures:—That an equitable distribution among the several states of the moneys arising from the sale

ELECTION SERMONS.

SEVERE COLD.

AMENDED CONSTITUTION.

of the public lands, for the purposes of education and internal improvement, comports alike with sound policy and the principles of justice;—And that the Executive of the United States, in his late removal of the public moneys from the place of custody established by law, exercised a power not given him by the constitution or laws, but in derogation of both." And a resolution was passed, instructing the senators and requesting the representatives in Congress from this state to sustain the principles and policy of the report. At this session an act was passed incorporating Norwich University; and with this year terminated the practice of having what was called an *election sermon*, which had been observed from the first organization of the government.*

The continuance of three political parties again in 1835 prevented the election of a governor by the people, but the anti-masonic candidates for lieutenant governor and treasurer were chosen by large majorities. After trying, at short intervals, for more than three weeks, without success, to elect a governor in joint committee of the two houses, the committee dissolved, and the duties of governor devolved upon Silas H. Jenison, who had been elected to the office of lieutenant governor. At the session of the legislature this year, a law was passed requiring vessels, navigating lake Champlain in the night time, to carry lights; and another to encourage the growing of silk in this state, by offering a premium for the same.

The 16th, 17th and 18th days of December in this year are memorable on account of the cold. The 16th was the most severe through the day, and has, probably, had few equals since the country was settled. The thermometer was about 20° below zero during the day, in the northern part of the state, with a very strong

piercing wind from the west. On the morning of the 18th the thermometer was from 30° to 40° below zero, in different parts of the state, and, in some places, the quick-silver actually congealed, but before noon, the cold very much moderated.

The year 1836 opens a new era in the history of legislation in Vermont. Up to this time the whole legislative power was vested in a house of representatives. The governor and council could propose amendments to bills, and in extreme cases suspend their passage till the next session of the general assembly, but by no means possessed the powers of a co-ordinate branch of the legislature. In the early part of this year, the constitution of the state was so amended as to create a senate in place of the council, with powers similar to those exercised by the senate of the United States, and of most of the individual states. The legislature came together in the fall of this year for the first time under the amended constitution. Silas H. Jenison, who had discharged the duties of that office the preceding year, was found to be elected governor by the people by a handsome majority. At this session an act was passed providing for the receipt of the public money of the United States, which should be deposited in this state, and for its distribution among the towns in proportion to their population; and directing that the interest of the same should be applied for the support of common schools. Resolutions were also passed, declaring "that neither Congress nor the state governments have any constitutional right to abridge the free expression of opinions, or the transmission of them through the public mail;—and that Congress do possess the power to abolish slavery and the slave trade in the District of Columbia."

By the concurrence of sundry causes, among which were the vast importations of foreign goods, the increase of trade upon borrowed capital, the unparalleled speculations in the public lands, the failure of the wheat crop, which rendered the importation of bread stuffs necessary, the removal of the deposits of public money from the United States Bank, and the efforts of that bank to close its concerns, produced, in 1837, one of the most disastrous panics, which the country had experienced for a long period. The currency was deranged, confidence destroyed, business paralyzed, and the banks obliged to suspend specie payments from one end of the Union to the other. Distress and ruin prevailed throughout the length and breadth of the land.

At the meeting of the legislature in

* The author has taken some pains to ascertain who have been the preachers before the General Assembly of this state, and the following, though incomplete, is the result of his inquiries:

1774 Peter Powers, C	1816 Samuel Austin, C
1778 Eden Burroughs, C	1817 Phineas Peck
1785 Lyman Potter, C	1818 Clark Kendrick, B
1789 Mr. Foster	1820 George Leonard, E
1790 Job Swift, C	1821 Joshua Bates, C
1794 Sam'l Williams, C	1822 John Lindsey
1795 Asa Burton, C	1823 Jo. W. Sawyer, B
1796 Dan Kent, C	1824 A. Chandler, C
1799 William Forsyth	1825 Robert Bartlett, U
1801 Nath'l Lambert, C	1826 William Fiske, M
1804 Sylvester Sage, C	1827 Thos. Goodwillie, P
1805 John Fitch, C	1828 Jonathan Woodman
1808 Tilton Eastman, C	1829 Chas. Walker C
1809 Sylvanus Haynes, B	1830 G. G. Ingersoll U
1811 Thomas Skeel	1831 Leland Howard B
1812 Isaac Beal, B	1832 Wm. S. Perkins, E
1814 Elijah Lyman, C	1833 Tobias Spicer, M
1815 Henry Davis, C	1834 Warren Skinner, U

REBELLION IN CANADA.

October, Governor Jenison, who was again elected by the people, adverted freely to the causes of the present distress, and closed his remarks on that topic by saying, that the wretched condition of the country "admonishes to economy in our public, and industry and frugality in our private affairs." The attention of the general assembly having been for several years called by the governor to the inefficient organization of the militia of this state, a general act was passed at this session for its better regulation and government. Resolutions were also passed declaring the right of Congress to abolish slavery and the slave trade in the District of Columbia; and solemnly protesting against the admission of Texas, or any other state, into this union, whose constitution tolerates domestic slavery.

In the month of November of this year commenced the ill-advised rebellion in Lower Canada. The people of this state, ignorant, in a great measure, of the true state of things in that province, had their sympathies very generally awakened in behalf of a people struggling, as they supposed, like our fathers in the revolution, to free themselves from the iron arm of tyranny and oppression, and the disposition to encourage the insurgents was manifested by public meetings, with inflammatory addresses and resolutions, in various places, and the more ardent and inconsiderate were engaged in collecting arms and men, and conveying them to the neighborhood of the line, to be employed in the *patriot war*. In this state of things, Gov. Jenison issued a proclamation, cautioning the citizens of this state against letting their enthusiasm in the cause of liberty lead them to acts inconsistent with the treaty relations between the United States and Great Britain, and warning them of the peril of violating the laws of neutrality established by Congress. But so great was the excitement at the time, that this proclamation, which is now regarded as well suited to the occasion, and honorable to the governor, was treated by the public press in this state with almost universal censure and condemnation; sad proof, how easily feeling may triumph over reason!

The insurgents, who had escaped into the United States, after their defeat and dispersion from St Charles and St. Eustache, made unwearied efforts to collect forces and supplies along the line, and, the latter part of February, 1838, resolved upon advancing into Canada from Alburgh, in this state. Being prevented from forming on this side of the line by Gen. Wool, who had command of a body

SLAVERY AND THE RIGHT OF PETITION.

of militia on the frontier, they crossed over and organized on the Canada side, to the number of five or six hundred; but they were undisciplined, poorly armed and poorly supplied with ammunition and provisions. In this condition of things, Gen. Wool received intelligence that 16 or 1700 British troops were on the march to attack the invaders. He immediately communicated this information to the *patriots*, giving them permission to return and surrender their arms to him; but, if they did not see fit to do that, and should attempt to retreat into Vermont, when attacked by the British, he informed them that he should order the militia to fire upon them. The men, belonging to the patriot force, by an almost unanimous vote, expressed their willingness to stand their ground, and trust the consequences; but their officers had not forgotten that discretion is the better part of valor. The little army, therefore, recrossed the line, laid down their arms, and dispersed.

Mr. Jenison was again elected governor in 1838. Having in his message of this, and of several preceding years, invited the attention of the legislature, to the subject of imprisonment for debt, a law was passed, declaring that "no person shall be hereafter arrested, or imprisoned on mesne process, or on any execution issued on a judgment founded on a contract, express or implied, made or entered into after the first day of January, 1839." Resolutions were also passed at this session, reiterating the sentiments of the resolutions, of 1837, in relation to Texas, and the District of Columbia, and declaring the resolution of Congress, prohibiting the debating, printing, reading, or referring petitions and memorials on the subject of slavery, to be "a daring infringement of the right of the people to petition, and a flagrant violation of the constitution of the United States."

In 1837, an act was passed, authorizing the governor and lieutenant governor, to appoint five suitable persons, to revise, compile and arrange, the statute laws of this state; in pursuance of which, Robert Pierpont, Samuel Swift, John Smith, Norman Williams, and Lucius B. Peck, were appointed to that service. After two years attention to the subject, these commissioners in the fall of 1839 laid the result of their labors before the legislature; and the discussion and adoption of these Revised Statutes, occupied the greater part of the session, which was consequently protracted much beyond the usual period.

The year 1840 witnessed one of the most tremendous efforts to change the

POLITICAL CONFLICT.

RESULT.

GEOLOGICAL SURVEY.

national administration, which has been witnessed since the organization of the government. The election of president of the United States drawing nigh, a convention of delegates, from the several states, assembled at Harrisburgh, in Pennsylvania, December 4, 1839, and nominated General William H. Harrison, and the Honorable John Tyler, candidates for president, and vice-president, in opposition to the incumbents, who were candidates for re-election, by the administration party, and the din of preparation for the combat was immediately sounded, from one extremity of the union to the other. State, county, town, and school-district committees, were every where organized, to further the object of the respective parties; conventions of the people, were assembled in various places, which were no longer reckoned by hundreds, but by thousands, and tens of thousands; inflammatory speeches were delivered, patriotic songs were composed and sung, and flags and mottos, and devices, were every where displayed. Every nook and corner of the land was ransacked, the indifferent were aroused, the wavering made to take a decided stand, the sick, and the superannuated were dragged from their beds, and all were marshalled for the great battle, at the ballot box; and, favored by a general impression that the derangement of the currency and the hardness of the times were in some way the result of a mal-administration of the general government, and that any change of the administration could not make matters worse, the result of the conflict was the election of Harrison and Tyler, by an overwhelming majority.

The aggregate vote cast in Vermont, this year, for governor, was 56,117, which exceeded the aggregate of any previous vote, for governor, 9215; and governor Jenison's majority, over the administration candidate, was 10,798.* In his message, at the opening of the session of the general assembly, the governor called the attention of the two houses to the proceedings of Congress, in relation to the representatives from New Jersey, and the matter was referred to a select committee. From this committee, were received two elaborate reports, both on party grounds, the majority report condemning, and the minority report justifying, the proceedings alluded to.† A resolution was, however, passed by a large majority of the general assembly, in

which they say, that the exclusion of the representatives, duly commissioned by the governor of New Jersey, and the substitution of five others not so commissioned, "without a trial of the election, was a violation of established usage—was an indignity to the authorities of New Jersey—was unjust, unconstitutional, and subversive of the liberties of this republic." The most elaborate act of this session was a general law on the subject of banking.

Although the people of this state had, through their representatives, repeatedly given a public manifestation of their disapprobation of slavery, by resolutions, and instructions to their delegation in Congress, there had been, for several years, an increasing number, who were desirous of manifesting a more decided hostility to the institution of slavery, and of adopting more efficient measures for its abolition. These views had led to the formation of an anti-slavery society in this state, but no measures were taken, by this class of our citizens, to organize as a separate political party, till the summer of 1841.

Governor Jenison, having signified his desire, no longer to be a candidate for re-election, Charles Paine was, this year, put in nomination, by the whigs, Nathan Smilie, by the democrats, and just upon the eve of the election, Titus Hutchinson, formerly chief judge of the supreme court, was brought forward as the candidate of the anti-slavery party. The consequence of these several movements, was the failure of a choice of governor by the people. The election thus devolving upon the general assembly, Mr. Paine was elected, at the first balloting, by a majority of 42 votes.

The subject of a geological survey of the state, was first brought before the legislature, in 1836. From that time to the present, the measure had been annually recommended by the governor, had been discussed by the general assembly, had been reported upon favorably, by all the committees to which it had been referred, and still no bill making provision for such a survey, could be carried through the house of representatives. At the session in 1840, the bill had been lost by a very small majority, and, this year, coming before the general assembly, strongly recommended by the new governor, the friends of the measure were now very sanguine in their expectations of success. In the senate, a bill making provision for a survey, was passed with but little opposition, but, while a large majority of the house of representatives,

* Journal House of Rep. for 1840, App. p. 1.

† Journal of House of Representatives, for 1840, Appendix, p. 53.

were probably in favor of the measure, all efforts to carry a bill in that body proved utterly unavailing. They rejected the bill reported by their own committee, and when the bill came in from the senate, with a proviso, calculated to remove the objections, which had been alleged against the measure in the house, that also was finally lost, by a majority of three votes. Thus it appears that Vermont, though *first* in the promise of advantages from a geological survey, is likely to be *last* in the adoption of measures, by which those advantages may be realized; for in nearly all the other states of the union, such surveys have already been made, or are now in progress.

The most important act passed by the legislature, at the session of 1841, was a new law in relation to the grand list, and by which all former laws upon the subject were repealed. Where the revenue of a country is raised, as in Vermont, by a direct tax upon the real and personal property of the citizens, the first object, undoubtedly, should be to ascertain what each individual really owns, that the share of the public burden, thrown upon each, may be in proportion to his ability to bear it; but this is found, in practice, to be an object of very difficult attainment. By most of our former listing laws, a large share of the taxable property, has been entered by name, with a fixed valuation. But this produced great inequality, on account of the great difference in the value of property of the same

kind, depending upon quality, and location. Another provision of the old listing laws required a person, who had purchased property on credit, and given his note for it, to pay taxes on that property, while the holder of the note was taxed for it as money at interest, thus taxing the same property twice, and throwing an unjust and heavy burden upon the man in debt. The listing law, enacted this year, was designed to correct these evils, by requiring all rateable property to be appraised at its cash value, and by allowing the debts due from a person, over and above the amount due to him, to be deducted from the appraised value of his personal property.

We have now brought down our sketch of the legislative proceedings in Vermont to the close of the year 1841. We are aware that it may be thought to be too brief to be fully satisfactory, and yet it is as full as the prescribed limits of our volume would justify. In our selections from the mass of materials contained in our journals, laws, &c., we are by no means sure that we have, in all cases, taken those things, which are the most valuable, or the most interesting to our readers. A lack of room must be our excuse for brevity, and a lack of judgment and time for research, for the injudicious selection and arrangement of materials. We trust, however, that the deficiencies of our narrative will be, in a good measure, supplied in other portions of the work.

CHAPTER VII.

POLITICAL INSTITUTIONS OF VERMONT.

SECTION I.

Constitution of Vermont.

The people of Vermont made a formal declaration of their independence, and of their right to organize and establish a government of their own, on the 15th day of January, 1777. On the 2d day of July following, a convention of delegates from the several towns assembled at Windsor, and adopted the first constitution of the state. This constitution was revised by the same convention in the following December, and went into effect, without

being submitted to the people for their ratification.

One of the principal advisers to these measures, out of the state, was Dr. Thomas Young, a distinguished citizen of Philadelphia. He had long taken a deep interest in the affairs of the New Hampshire grants, and in the following letter, addressed to the inhabitants of Vermont, and which has already been mentioned,* he exhorts them to take a decided stand, to organize a government and adopt a constitution.

* Part II. page 51.

DR. YOUNG'S LETTER

TO THE INHABITANTS OF VERMONT.

"To the Inhabitants of VERMONT, a Free and Independent State, bounding on the River Connecticut and Lake Champlain.

Philadelphia, April 11, 1777.

GENTLEMEN,

Numbers of you are knowing to the zeal with which I have exerted myself in your behalf, from the beginning of your struggle with the New York monopolizers. As the Supreme Arbiter of right has smiled on the just cause of North America at large, you, in a peculiar manner, have been highly favored. God has done by you the best thing commonly done for our species. He has put it fairly in your power to help yourselves.

I have taken the minds of several leading members in the Honorable the Continental Congress, and can assure you that you have nothing to do but send attested copies of the recommendation to take up government to every township in your district, and invite all your freeholders and inhabitants to meet in their respective townships, and choose members for a general convention to meet at an early day to choose delegates for the general Congress, a committee of safety, and to form a constitution for your state.

Your friends here tell me that some are in doubt whether delegates from your district would be admitted into Congress. I tell you to organize fairly, and make the experiment, and I will ensure your success, at the risk of my reputation, as a man of honor or common sense. Indeed, they can by no means refuse you! You have as good a right to choose how you will be governed, and by whom, as they had.

I have recommended to your committee the constitution of Pennsylvania for a model, which, with a very little alteration, will, in my opinion, come as near perfection as any thing yet concerted by mankind. This constitution has been sifted with all the criticism that a band of despots were masters of, and has bid defiance to their united powers.

The alteration I would recommend, is that all the bills, intended to be passed into laws, should be laid before the executive board for their perusal and proposals of amendment. All the difference, then, between such a constitution and those of Connecticut and Rhode Island in the grand outlines is, that in one case the executive power can advise, and in the other compel. For my own part, I esteem the people at large the true proprietors of governmental power. They are the supreme constituent power, and, of course, their immediate representatives are the

supreme delegate power; and as soon as the delegate power gets too far out of the hands of the constituent power, a tyranny is in some degree established.

Happy are you, that, in laying the foundation of a new government, you have a digest drawn from the purest fountains of antiquity, and improved by the readings and observations of the great Dr. Franklin, David Rittenhouse, Esq., and others. I am certain you may build on such a basis a system, which will transmit liberty and happiness to posterity.

Let the scandalous practice of bribing men by places, commissions, &c., be held in abhorrence among you. By entrusting only men of capacity and integrity in public affairs, and by obliging even the best men to fall into the common mass of the people every year, and be sensible of their need of the popular good will to sustain their political importance, are your liberties well secured. These plans effectually promise this security.

May Almighty God smile upon your arduous and important undertaking, and inspire you with that wisdom, virtue, public spirit and unanimity, which ensures success in the most hazardous enterprises! I am, Gentlemen, your sincere friend and humble servant,

THOMAS YOUNG.

April 12, 1777.

Your committee have obtained for you a copy of the recommendation of Congress, to all such bodies of men as looked upon themselves returned to a state of nature, to adopt such government as should, in the opinion of the representatives of the people, best conduce to the happiness and safety of their constituents in particular, and America in general.

You may, perhaps, think strange, that nothing further is done for you at this time than to send you this extract. But if you consider that till you incorporate and actually announce to Congress your having become a body politic, they cannot treat with you as a free state. While New York claims you as subjects of that government, my humble opinion is, your own good sense will suggest to you that no time is to be lost in availing yourselves of the same opportunity your assuming mistress is improving to establish a dominion for herself and you too.

A word to the wise is sufficient."

In this letter, it will be seen that Dr. Young not only proposes the constitution of Pennsylvania as a model, but he expressly recommends, that the whole legislative power should be vested in the immediate representatives of the people—

HISTORY OF THE CONSTITUTION.

that the governor and executive council should have power to advise, but should have no power to negative the acts of the representatives—and that all officers should fall into the common mass of the people every year. These recommendations so fully express the peculiar features, which have, till recently, characterized the constitution of Vermont, that there can be no doubt that they originated in the suggestions of Dr. Young.*

* It seems to have been generally understood, that the original draught of the Constitution of Vermont was made by Dr. Young himself, and transmitted by him to the Vermont council of safety, and it is highly probable that it was so; but we have met with no evidence, which is decisive on this point. Believing that our readers generally will be interested in any thing which reflects light upon the origin of that instrument, and upon the important period in our history when it was formed, we have transcribed a few items from the account book of Col. Ira Allen, the first treasurer of the state. When the first of these charges were made, the New Hampshire grants had not assumed the title of a state, and the government, which then existed, was vested by a convention of the people, in a Council of Safety.

1776. Nov. 8th. To 67 days by appointment of the Convention at Westminster to go through Cumberland and Gloucester counties, to get associations formed, and petitions signed and collected, and to unite the people for a full convention,	£33 10 0
To expense money,	24 7
1777. Jan'y 17th. To 9 days, part at Westminster, in assisting to write a declaration for a state, and other pieces for the Hartford papers,	£4 10 0
" April 20th. To writing a pamphlet, Vindicating the Rights of the people to form a state and in answer to a pamphlet published by the Convention of N. Y. dated Oct. 2d, 1776, and sent to the county of Cumberland,	£6 0 0
To 3 days going to Hartford to get s'd pamphlet printed,	1 10 0
" August 10. To 14 days going into the county of Cumberland—to explain a Resolution of Congress—to counteract the Policy of N. Y.—to appoint some officers for Col. Samuel Herrick's Regt. of Rangers, pay bounty money, &c.	£7 0 0
" October 30. To writing a pamphlet in answer to a Resolution of the Convention of N. Y. of May 10, 1777, with Remarks, &c.	3 10 0
Nov. 2. To 3 days going to Hartford to get s'd Pamphlet Printed, a 10s.	1 10 0
To 15 days going from Salisbury to Williamstown and there with President Chittenden writing the Preamble to the Constitution, &c. from there to Bennington to confer with the Council respecting s'd Pre-	

PREAMBLE TO THE FIRST CONSTITUTION.

In 1786 the constitution was revised by the first council of censors, and again in 1792, and was adopted in its present form by a convention, assembled at Windsor, on the 4th of July, 1793. From that date, although the successive councils of censors had recommended several amendments, none were adopted till 1828, when the first article of amendment was added by a convention at Montpelier, on the 26th day of June of that year. The subsequent articles of amendment, from 2 to 13 inclusive, were adopted by a convention at Montpelier, on the 6th day of January, 1836. The present council of censors have proposed some further amendments of the constitution, an account of which may be found in the fifth section of this chapter.

Believing that most persons will be better satisfied with the constitution itself, than with any abstract, or summary of its provisions, and for the purpose of placing that important instrument within the reach of all, we shall here insert it, with the amendments, entire, prefacing it with the original preamble of the first constitution, adopted in 1777.

PREAMBLE.

WHEREAS, all government ought to be instituted and supported, for the security and protection of the community, as such, and to enable the individuals who compose it, to enjoy their natural rights, and the other blessings which the Author of existence has bestowed upon man; and whenever those great ends of government are not obtained, the people have a right, by common consent, to change it, and take such measures as to them may appear necessary to promote their safety and happiness.

And whereas, the inhabitants of this state have, (in consideration of protection only) heretofore ac-

amble—assisting to complete compiling from manuscript, the Constitution of the state,	£7 10 0
Expense money	3 2 8
1777. Nov. 20. To Cash Paid John Knickerbacor for copying the Constitution for the Press	18 0
" Nov. 26. To 3 days going from Salisbury to Hartford to get the Constitution Printed	1 10 0
1778 Aug. 8. To 7 days in going to Hartford to get Col. E. Allen's Animadversary Address &c printed (Note. This Pamphlet was distributed the last of the month.)	13 9 2
" Oct. 26. To 2 days at Windsor drawing a plan for a state seal and getting Mr. R. Dean to make it 10s	1 0 0
Dec. 25. To 18 days assisting to revise Vt. Appeal wrote by S. R. Bradley Esq. &c.	9 16 0

PREAMBLE TO THE FIRST CONSTITUTION

ADOPTED IN 1777.

knowledge of allegiance to the King of Great Britain, and the said King has not only withdrawn that protection, but commenced, and still continues to carry on, with unabated vengeance, a most cruel and unjust war against them; employing therein, not only the troops of Great Britain, but foreign mercenaries, savages and slaves, for the avowed purpose of reducing them to a total and abject submission to the despotic domination of the British parliament, with many other acts of tyranny, (more fully set forth in the declaration of Congress) whereby all allegiance and fealty to the said King and his successors, are dissolved and at an end; and all power and authority derived from him ceased in the American Colonies.

And whereas, the territory which now comprehends the State of *Vermont* did antecedently, of right, belong to the government of *New-Hampshire*; and the former Governor thereof, viz. his Excellency *Benning Wentworth*, Esq. granted many charters of lands and corporations, within this State, to the present inhabitants and others. And whereas, the late Lieutenant Governor *Colden*, of *New York*, with others, did, in violation of the tenth command, covet those very lands; and by a false representation made to the court of Great Britain, (in the year 1764. that for the convenience of trade and administration of justice, the inhabitants were desirous of being annexed to that government,) obtained jurisdiction of those very identical lands, *ex-parte*;* which ever was, and is, disagreeable to the inhabitants. And whereas, the legislature of *New York*, ever have, and still continue to disown the good people of this State, in their landed property, which will appear in the complaints hereafter inserted, and in the 36th section of their present constitution, in which is established the grants of land made by that government.

They have refused to make re-grants of our lands to the original proprietors and occupants, unless at the exorbitant rate of 2300 dollars fees for each township; and did enhance the quit-rents, three fold, and demanded an immediate delivery of the title derived before from *New Hampshire*.

The judges of their supreme court have made a solemn declaration, that the charters, conveyances, &c. of the lands included in the before described premises, were utterly null and void, on which said title was founded: in consequence of which declaration, writs of possession have been by them issued, and the sheriff of the county of Albany sent, at the head of six or seven hundred men, to enforce the execution thereof.†

They have passed an act, annexing a penalty thereto, of thirty pounds fine and six months imprisonment, on any person who should refuse assisting the sheriff, after being requested, for the purpose of executing writs of possession.

The Governors, *Dunmore*, *Tryon*, and *Colden*, have made re-grants of several tracts of land included in the premises, to certain favorite land jobbers in the government of *New York*, in direct violation of his Britannic majesty's express prohibition, in the year 1767.‡

They have issued proclamations, wherein they have offered large sums of money, for the purpose of apprehending those very persons who have dared boldly, and publicly, to appear in defence of their just rights.

They did pass twelve acts of outlawry, on the 9th day of March A. D. 1774, empowering the respective judges of their supreme court, to award execution of death against those inhabitants in said district, that they should judge to be offenders, without trial.

They have, and still continue, an unjust claim to those lands, which greatly retards emigration into, and the settlement of this State.

They have hired foreign troops, emigrants from *Scotland*, at two different times, and armed them, to drive us out of possession.

They have sent the savages on our frontiers, to distress us.

They have proceeded to erect the counties of *Cumberland* and *Gloucester*, and establish courts of justice there, after they were discountenanced by the authority of Great Britain.

The free Convention of the State of *New York*, at *Harlem*, in the year 1776, unanimously voted, "That all quit-rents, formerly due to the King of Great Britain, are now due and owing to this Convention, or such future government as shall be hereafter established in this State."

In the several stages of the aforesaid oppressions, we have petitioned his Britannic majesty, in the most humble manner, for redress, and have, at very great expense, received several reports in our favor; and, in other instances, wherein we have petitioned the late legislative authority of *New York*, these petitions have been treated with neglect.

And whereas, the local situation of this State, from *New York*, at the extreme part, is upward of four hundred and fifty miles from the seat of that government, which renders it extremely difficult to continue under the jurisdiction of said State.

Therefore, it is absolutely necessary, for the welfare and safety of the inhabitants of this State, that it should be, henceforth, a free and independent State; and that a just, permanent and proper form of government, should exist in it, derived from, and founded on, the authority of the people only, agreeably to the direction of the honorable American Congress.

We, the representatives of the freemen of *Vermont*, in General Convention met, for the express purpose of forming such a government,—confessing the goodness of the Great Governor of the universe, [who alone, knows to what degree of earthly happiness, mankind may attain, by perfecting the arts of government,] in permitting the people of this State, by common consent, and without violence, deliberately to form for themselves such just rules as they shall think best for governing their future society; and being fully convinced that it is our indispensable duty, to establish such original principles of government, as will best promote the general happiness of the people of this State, and their posterity, and provide for future improvements, without partiality for, or prejudice against, any particular class, sect,

* Part second, page 18. † Ibid, page 21. ‡ Ibid, page 19.

PRESENT CONSTITUTION.

or denomination of men whatever,—do, by virtue of authority vested in us, by our constituents, ordain, declare, and establish, the following declaration of rights, and frame of government, to be the CONSTITUTION of this COMMONWEALTH, and to remain in force therein, forever, unaltered, except in such articles, as shall, hereafter, on experience, be found to require improvement, and which shall, by the same authority of the people, fairly delegated, as this frame of government directs, be amended or improved, for the more effectual obtaining and securing the great end and design of all government, herein before mentioned.

CONSTITUTION.

PART I. DECLARATION OF RIGHTS.

I. That all men are born equally free and independent, and have certain natural, inherent, and inalienable rights, among which, are the enjoying and defending life and liberty, acquiring, possessing, and protecting property, and pursuing and obtaining happiness, and safety;—therefore, no male person, born in this country, or brought from over sea, ought to be holden, by law, to serve any person, as a servant, slave, or apprentice, after he arrives to the age of twenty-one years, nor female, in like manner, after she arrives to the age of eighteen years, unless they are bound by their own consent after they arrive to such age, or bound by law for the payment of debts, damages, fines, costs, or the like.

II. That private property ought to be subservient to public uses, when necessity requires it; nevertheless, whenever any person's property is taken for the use of the public, the owner ought to receive an equivalent in money.

III. That all men have a natural and inalienable right to worship ALMIGHTY God, according to the dictates of their own consciences and understandings, as in their opinion shall be regulated by the word of God; and that no man ought to, or of right can be compelled to attend any religious worship, or erect or support any place of worship, or maintain any minister, contrary to the dictates of his conscience; nor can any man be justly deprived or abridged of any civil right, as a citizen, on account of his religious sentiments, or peculiar mode of religious worship; and that no authority can, or ought to be vested in, or assumed by, any power whatever, that shall in any case interfere with, or in any manner control the rights of conscience, in the free exercise of religious worship: nevertheless, every sect or denomination of christians ought to observe the Sabbath or Lord's day, and keep up some sort of religious worship, which to them shall seem most agreeable to the revealed will of God.

DECLARATION OF RIGHTS.

IV. Every person within this state ought to find a certain remedy, by having recourse to the laws, for all injuries or wrongs, which he may receive in his person, property, or character: he ought to obtain right and justice freely, and without being obliged to purchase it; completely, and without any denial; promptly, and without delay, conformably to the laws.

V. That the people of this state, by their legal representatives, have the sole, inherent and exclusive right of governing and regulating the internal police of the same.

VI. That all power being originally inherent in, and consequently derived from, the people; therefore, all officers of government, whether legislative or executive, are their trustees and servants, and at all times, in a legal way, accountable to them.

VII. That government is, or ought to be, instituted for the common benefit, protection, and security of the people, nation, or community, and not for the particular emolument or advantage of any single man, family, or set of men, who are a part only of that community; and that the community hath an indubitable, inalienable, and indefeasible right to reform or alter government, in such manner as shall be, by that community, judged most conducive to the public weal.

VIII. That all elections ought to be free, and without corruption, and that all freemen, having a sufficient evident common interest with, and attachment to, the community, have a right to elect and be elected into office, agreeably to the regulations made in this constitution.

IX. That every member of society hath a right to be protected in the enjoyment of life, liberty, and property, and therefore is bound to contribute his proportion towards the expense of that protection, and yield his personal service when necessary, or an equivalent thereto; but no part of any person's property can be justly taken from him, or applied to public uses, without his own consent, or that of the representative body of the freemen; nor can any man, who is conscientiously scrupulous of bearing arms, be justly compelled thereto, if he will pay such equivalent; nor are the people bound by any law but such as they have in like manner assented to, for their common good. And, previous to any law being made to raise a tax, the purpose for which it is to be raised ought to appear evident to the legislature to be of more service to the community, than the money would be if not collected.

X. That in all prosecutions for criminal

DECLARATION OF RIGHTS.

offences, a person hath a right to be heard, by himself and his counsel; to demand the cause and nature of his accusation; to be confronted with the witnesses; to call for evidence in his favor, and a speedy public trial, by an impartial jury of the country, without the unanimous consent of which jury, he cannot be found guilty; nor can he be compelled to give evidence against himself; nor can any person be justly deprived of his liberty, except by the laws of the land, or the judgment of his peers.

XI. That the people have a right to hold themselves, their houses, papers, and possessions, free from search or seizure, and therefore warrants without oath or affirmation first made, affording sufficient foundation for them, and whereby any officer or messenger may be commanded or required to search suspected places, or to seize any person or persons, his, her, or their property, not particularly described, are contrary to that right, and ought not to be granted.

XII. That when any issue in fact, proper for the cognizance of a jury, is joined in a court of law, the parties have a right to trial by jury, which ought to be held sacred.

XIII. That the people have a right of freedom of speech, and of writing and publishing their sentiments concerning the transactions of government, and therefore the freedom of the press ought not to be restrained.

XIV. The freedom of deliberation, speech, and debate, in the legislature, is so essential to the rights of the people, that it cannot be the foundation of any accusation or prosecution, action or complaint, in any other court, or place whatsoever.

XV. The power of suspending laws, or the execution of laws, ought never to be exercised but by the legislature, or by authority derived from it, to be exercised in such particular cases as this constitution, or the legislature, shall provide for.

XVI. That the people have a right to bear arms for the defence of themselves and the state; and as standing armies, in time of peace, are dangerous to liberty, they ought not to be kept up: and that the military should be kept under strict subordination to, and be governed by, the civil power.

XVII. That no person in this state can in any case be subjected to law-martial, or to any penalties or pains by virtue of that law, except those employed in the army, and the militia in actual service.

XVIII. That frequent recurrence to

FRAME OF GOVERNMENT.

fundamental principles, and a firm adherence to justice, moderation, temperance, industry, and frugality, are absolutely necessary to preserve the blessings of liberty, and keep government free; the people ought, therefore, to pay particular attention to these points in the choice of officers and representatives, and have a right, in a legal way, to exact a due and constant regard to them from their legislators and magistrates, in making and executing such laws as are necessary for the good government of the state.

XIX. That all people have a natural and inherent right to emigrate from one state to another that will receive them.

XX. That the people have a right to assemble together to consult for their common good; to instruct their representatives; and to apply to the legislature for redress of grievances, by address, petition, or remonstrance.

XXI. That no person shall be liable to be transported out of this state, for trial, for any offence committed within the same.

PART II. FRAME OF GOVERNMENT.

SECTION 1. The commonwealth or state of Vermont shall be governed hereafter by a governor, (or lieutenant governor,) council, and an assembly of the representatives of the freemen of the same, in manner and form following:

SECT. 2. The supreme legislative power shall be vested in a house of representatives of the freemen of the commonwealth or state of Vermont.

SECT. 3. The supreme executive power shall be vested in a governor, or, in his absence, a lieutenant governor and council.

SECT. 4. Courts of justice shall be maintained in every county in this state, and also in new counties when formed, which courts shall be open for the trial of all causes proper for their cognizance, and justice shall be therein impartially administered without corruption, or unnecessary delay. The judges of the supreme court shall be justices of the peace throughout the state, and the several judges of the county courts in their respective counties, by virtue of their office, except in the trial of such causes as may be appealed to the county court.

SECT. 5. A future legislature may, when they shall conceive the same to be expedient and necessary, erect a court of chancery, with such powers as are usually exercised by that court, or as shall appear for the interest of the commonwealth; *provided*, they do not constitute themselves the judges of said court.

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FRAME OF GOVERNMENT.

SECT. 6. The legislative, executive, and judiciary departments shall be separate and distinct, so that neither exercise the powers properly belonging to the other.

SECT. 7. In order that the freemen of this state might enjoy the benefit of election as equally as maybe, each town within this state, that consists or may consist of eighty taxable inhabitants, within one septenary or seven years next after the establishing this constitution, may hold elections therein, and choose, each, two representatives; and each other inhabited town in this state, may, in like manner, choose one representative, to represent them in general assembly, during the septenary or seven years. And after that, each inhabited town may, in like manner, hold such election, and choose one representative, forever thereafter.

SECT. 8. The house of representatives of the freemen of this state shall consist of persons most noted for wisdom and virtue, to be chosen by ballot by the freemen of every town in this state, respectively, on the first Tuesday of September, annually, forever.

SECT. 9. The representatives so chosen, (a majority of whom shall constitute a quorum for transacting any other business than raising a state tax, for which two-thirds of the members elected shall be present,) shall meet on the second Thursday of the succeeding October, and shall be styled, *The General Assembly of the State of Vermont*: they shall have power to choose their speaker, secretary of state, their clerk, and other necessary officers of the house; sit on their own adjournments; prepare bills and enact them into laws; judge of the elections and qualifications of their own members: they may expel members, but not for causes known to their constituents antecedent to their election; they may administer oaths and affirmations in matters depending before them; redress grievances; impeach state criminals; grant charters of incorporation; constitute towns, boroughs, cities, and counties: they may, annually, on their first session after their election, in conjunction with the council, (or oftener if need be) elect judges of the supreme and several county and probate courts, sheriffs and justices of the peace; and also, with the council, may elect major-generals and brigadier-generals, from time to time, as often as there shall be occasion; and they shall have all other powers necessary for the legislature of a free and sovereign state. But they shall have no power to add to, alter, abolish, or infringe any part of this constitution.

SECT. 10. The supreme executive council of this state shall consist of a governor, lieutenant governor, and twelve persons, chosen in the following manner, to wit:—the freemen of each town shall, on the day of election for choosing representatives to attend the general assembly, bring in their votes for governor, with his name fairly written, to the constable, who shall seal them up, and write on them, "*Votes for Governor*," and deliver them to the representative chosen to attend, the general assembly. And at the opening of the general assembly there shall be a committee appointed, out of the council and assembly, who, after being duly sworn to the faithful discharge of their trust, shall proceed to receive, sort, and count the votes for the governor, and declare the person who has the major part of the votes, to be governor for the year ensuing. And if there be no choice made, then the council and general assembly, by their joint-ballots, shall make choice of a governor. The lieutenant governor and treasurer shall be chosen in the manner above directed. And each freeman shall give in twelve votes for twelve councillors, in the same manner, and the twelve highest in nomination shall serve, for the ensuing year, as councillors.

SECT. 11. The governor, and in his absence the lieutenant governor, with the council (a major part of whom, including the governor or lieutenant governor, shall be a quorum to transact business) shall have power to commission all officers, and also to appoint officers, except where provision is or shall be otherwise made by law, or this frame of government; and shall supply every vacancy in any office, occasioned by death or otherwise, until the office can be filled in the manner directed by law, or this constitution:—

They are to correspond with other states; transact business with officers of government, civil and military, and to prepare such business as may appear to them necessary to lay before the general assembly: they shall sit as judges to hear and determine on impeachments, taking to their assistance, for advice only, the judges of the supreme court; and shall have power to grant pardons and remit fines, in all cases whatsoever, except in treason and murder, in which they shall have power to grant reprieves, but not to pardon until after the end of the next session of assembly; and except in cases of impeachment, in which there shall be no remission or mitigation of punishment, but by act of legislation: they are to take care that the laws be faithfully executed: they are to expedite the execution of such

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measures as may be resolved upon by the general assembly; and they may draw upon the treasury for such sums as may be appropriated by the house of representatives: they may also lay embargoes, or prohibit the exportation of any commodity for any time not exceeding thirty days, in the recess of the house only. They may grant such licences as shall be directed by law; and shall have power to call together the general assembly, when necessary, before the day to which they shall stand adjourned. The governor shall be captain-general and commander in chief of the forces of the state, but shall not command in person, except advised thereto by the council, and then only so long as they shall approve thereof. And the lieutenant governor shall, by virtue of his office, be lieutenant general of all the forces of the state. The governor, or lieutenant governor, and the council, shall meet at the time and place with the general assembly: the lieutenant governor shall, during the presence of the commander in chief, vote and act as one of the council; and the governor, and, in his absence, the lieutenant governor, shall, by virtue of their offices, preside in council, and have a casting, but no other vote. Every member of the council shall be a justice of the peace for the whole state, by virtue of his office. The governor and council shall have a secretary, and keep fair books of their proceedings, wherein any councillor may enter his dissent, with his reasons to support it. And the governor may appoint a secretary for himself and his council.

SECT. 12. The representatives having met and chosen their speaker and clerk, shall, each of them, before they proceed to business, take and subscribe, as well the oath or affirmation of allegiance hereinafter directed, (except where they shall produce certificates of their having heretofore taken and subscribed the same,) as the following oath or affirmation, viz.:

"You do solemnly swear (or affirm) that as a member of this assembly you will not propose or assent to any bill, vote, or resolution, which shall appear to you injurious to the people, nor do or consent to any act or thing whatever, that shall have a tendency to lessen or abridge their rights and privileges, as declared by the constitution of this state; but will in all things conduct yourself as a faithful, honest representative and guardian of the people, according to the best of your judgment and abilities. (In case of an oath) So help you God, (and in case of an affirmation) under the pains and penalties of perjury."

SECT. 13. The doors of the house in which the general assembly of this commonwealth shall sit, shall be open, for the admission of all persons who behave decently, except only when the welfare of the state may require them to be shut.

SECT. 14. The votes and proceedings of the general assembly shall be printed (when one third of the members think it necessary) as soon as convenient after the end of each session, with the yeas and nays on any question, when required by any member, (except where the votes shall be taken by ballot,) in which case every member shall have a right to insert the reasons of his vote, upon the minutes.

SECT. 15. The style of the laws of this state, in future to be passed, shall be, *It is hereby enacted by the General Assembly of the state of Vermont.*

SECT. 16. To the end that laws, before they are enacted, may be more maturely considered, and the inconvenience of hasty determinations as much as possible prevented, all bills, which originate in the assembly, shall be laid before the governor and council, for their revision and concurrence, or proposals of amendment, who shall return the same to the assembly, with their proposals of amendment, if any, in writing; and if the same are not agreed to by the assembly, it shall be in the power of the governor and council to suspend the passing of such bills until the next session of the legislature. Provided, that if the governor and council shall neglect or refuse to return any such bill to the assembly, with written proposals of amendment, within five days, or before the rising of the legislature, the same shall become a law.

SECT. 17. No money shall be drawn out of the treasury, unless first appropriated by act of legislation.

SECT. 18. No person shall be elected a representative until he has resided two years in this state, the last of which shall be in the town for which he is elected.

SECT. 19. No member of the council, or house of representatives, shall directly or indirectly receive any fee or reward to bring forward or advocate any bill, petition, or other business to be transacted in the legislature, or advocate any cause as counsel in either house of legislation, except when employed in behalf of the state.

SECT. 20. No person ought, in any case, or in any time, to be declared guilty of treason, or felony, by the legislature.

SECT. 21. Every man of the full age of twenty one years, having resided in this state for the space of one whole year next before the election of representatives,

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and is of a quiet and peaceable behavior, and will take the following oath or affirmation, shall be entitled to all the privileges of a freeman of this state :

"You solemnly swear (or affirm) that whenever you give your vote or suffrage, touching any matter that concerns the state of Vermont, you will do it so as in your conscience you shall judge will most conduce to the best good of the same, as established by the constitution, without fear or favor of any man."

SECT. 22. The inhabitants of this state shall be trained and armed for its defence, under such regulations, restrictions, and exceptions, as Congress, agreeably to the constitution of the United States, and the legislature of this state, shall direct. The several companies of militia shall, as often as vacancies happen, elect their captain and other officers, and the captains and subalterns shall nominate and recommend the field officers, of their respective regiments, who shall appoint their staff officers.

SECT. 23. All commissions shall be in the name of the freemen of the state of Vermont, sealed with the state seal, signed by the governor, and in his absence the lieutenant governor, and attested by the secretary : which seal shall be kept by the governor.

SECT. 24. Every officer of state, whether judicial or executive, shall be liable to be impeached by the general assembly, either when in office, or after his resignation, or removal, for mal-administration. All impeachments shall be before the governor and council, who shall hear and determine the same, and may award costs ; and no trial or impeachment shall be a bar to a prosecution at law.

SECT. 25. As every freeman, to preserve his independence, (if without a sufficient estate) ought to have some profession, calling, trade, or farm, whereby he may honestly subsist, there can be no necessity for, nor use in, establishing offices of profit, the usual effects of which are dependence and servility, unbecoming freemen, in the possessors, or expectants, and faction, contention and discord among the people. But if any man is called into public service to the prejudice of his private affairs, he has a right to a reasonable compensation ; and whenever an office, through increase of fees, or otherwise, becomes so profitable as to occasion many to apply for it, the profits ought to be lessened by the legislature. And if any officer shall wittingly and wilfully take greater fees than the law allows him, it shall ever after disqualify him from holding any office in this state, until he shall be restored by act of legislation.

SECT. 26. No person in this state shall be capable of holding or exercising more than one of the following offices at the same time, viz : governor, lieutenant governor, judge of the supreme court, treasurer of the state, member of the council, member of the general assembly, surveyor general, or sheriff. Nor shall any person, holding any office of profit or trust under the authority of Congress, be eligible to any appointment in the legislature, or of holding any executive or judiciary office under this state.

SECT. 27. The treasurer of the state shall, before the governor and council, give sufficient security to the secretary of the state, in behalf of the general assembly, and each high sheriff, before the first judge of the county court, to the treasurer of their respective counties, previous to their respectively entering upon the execution of their offices, in such manner and in such sums, as shall be directed by the legislature.

SECT. 28. The treasurer's account shall be annually audited, and a fair statement thereof be laid before the general assembly, at their session in October.

SECT. 29. Every officer, whether judicial, executive, or military, in authority under this state, before he enters upon the execution of his office, shall take and subscribe the following oath, or affirmation, of allegiance to this state (unless he shall produce evidence that he has before taken the same) ; and also the following oath or affirmation of office, except military officers, and such as shall be exempted by the legislature :

The oath, or affirmation, of allegiance :

"You do solemnly swear (or affirm) that you will be true and faithful to the state of Vermont, and that you will not directly or indirectly, do any act or thing injurious to the constitution or government thereof, as established by convention. (If an oath) so help you God, (if an affirmation) under the pains and penalties of perjury."

The oath, or affirmation, of office :

"You do solemnly swear (or affirm) that you will faithfully execute the office of for the of and will therein do equal right and justice to all men, to the best of your judgment and abilities, according to law. (If an oath) so help you God, (if an affirmation) under the pains and penalties of perjury."

SECT. 30. No person shall be eligible to the office of governor, or lieutenant governor, until he shall have resided in this state four years next preceding the day of his election.

SECT. 31. Trials of issues proper for

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the cognizance of a jury, in the supreme and county courts, shall be by jury, except where parties otherwise agree: and great care ought to be taken to prevent corruption, or partiality, in the choice and return, or appointment of juries.

SECT. 32. All prosecutions shall commence, *By the authority of the state of Vermont*: all indictments shall conclude with these words: *against the peace and dignity of the state*; and all fines shall be proportioned to the offences.

SECT. 33. The person of a debtor, where there is not strong presumption of fraud, shall not be continued in prison after delivering up and assigning over, *bona fide*, all his estate, real and personal, in possession, reversion, or remainder, for the use of his creditors, in such manner as shall be hereafter regulated by law. And all prisoners, unless in execution, or committed for capital offences, when the proof is evident or presumption great, shall be bailable, by sufficient sureties; nor shall excessive bail be exacted for bailable offences.

SECT. 34. All elections, whether by the people, or the legislature, shall be free and voluntary; and any elector, who shall receive any gift, or reward, for his vote, in meat, drink, moneys, or otherwise, shall forfeit his right to elect at that time, and suffer such other penalty as the law shall direct; and any person who shall directly or indirectly give, promise, or bestow, any such rewards to be elected, shall thereby be rendered incapable to serve for the ensuing year, and be subject to such further punishment as a future legislature shall direct.

SECT. 35. All deeds and conveyances of land shall be recorded in the town clerk's office, in their respective towns, and for want thereof, in the county clerk's office of the same county.

SECT. 36. The legislature shall regulate entails, in such manner as to prevent perpetuities.

SECT. 37. To deter more effectually from the commission of crimes, by continued visible punishments of long duration, and to make sanguinary punishments less necessary, means ought to be provided for punishing by hard labor those who shall be convicted of crimes not capital, whereby the criminal shall be employed for the benefit of the public, or for the reparation of injuries done to private persons; and all persons, at proper times, ought to be permitted to see them at their labor.

SECT. 38. The estates of such persons as may destroy their own lives, shall not, for that offence, be forfeited; but descend,

or ascend, in the same manner as if such persons had died in a natural way. Nor shall any article, which shall accidentally occasion the death of any person, be henceforth deemed a deodand, or in any wise forfeited, on account of such misfortune.

SECT. 39. Every person of good character, who comes to settle in this state, having first taken an oath or affirmation of allegiance to the state, may purchase, or by other just means acquire, hold, and transfer land, or other real estate, and after one year's residence shall be deemed a free denizen thereof, and entitled to all rights of a natural born subject of this state; except that he shall not be capable of being elected governor, lieutenant governor, treasurer, councillor, or representative in assembly, until after two years' residence.

SECT. 40. The inhabitants of this state shall have liberty in seasonable times to hunt and fowl, on the lands they hold, and on other lands not inclosed, and in like manner to fish in all boatable and other waters (not private property) under proper regulations to be hereafter made and provided by the general assembly.

SECT. 41. Laws for the encouragement of virtue and prevention of vice and immorality ought to be constantly kept in force, and duly executed; and a competent number of schools ought to be maintained in each town, for the convenient instruction of youth, and one or more grammar-schools to be incorporated, and properly supported, in each county in the state. And all religious societies or bodies of men that may be hereafter united or incorporated for the advancement of religion and learning, or for other pious and charitable purposes, shall be encouraged and protected in the enjoyment of the privileges, immunities, and estates, which they in justice ought to enjoy, under such regulations as the general assembly of this state shall direct.

SECT. 42. The declaration of the political rights and privileges of the inhabitants of this state, is hereby declared to be a part of the constitution of this commonwealth, and ought not to be violated, on any pretence whatsoever.

SECT. 43. In order that the freedom of this commonwealth may be preserved inviolate forever, there shall be chosen by ballot, by the freemen of this state, on the last Wednesday in March, in the year one thousand seven hundred and ninety-nine, and on the last Wednesday in March in every seven years thereafter, thirteen persons, who shall be chosen in the same manner the council is chosen, except they

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shall not be out of the council or general assembly, to be called *the council of censors*, who shall meet together on the first Wednesday of June next ensuing their election, the majority of whom shall be a quorum in every case, except as to calling a convention, in which two thirds of the whole number elected shall agree; and whose duty it shall be to inquire whether the constitution has been preserved inviolate in every part during the last septenary, (including the year of their service,) and whether the legislative and executive branches of government have performed their duty as guardians of the people, or assumed to themselves, or exercised other or greater powers than they are entitled to by the constitution. They are also to inquire whether the public taxes have been justly laid and collected in all parts of this commonwealth; in what manner the public moneys have been disposed of, and whether the laws have been duly executed. For these purposes they shall have power to send for persons, papers, and records;—they shall have authority to pass public censures, to order impeachments, and to recommend to the legislature the repealing such laws as shall appear to them to have been passed contrary to the principles of the constitution: these powers they shall continue to have for and during the space of one year from the day of their election, and no longer. The said council of censors shall also have power to call a convention, to meet within two years after their sitting, if there appears to them an absolute necessity of amending any article of this constitution which may be defective, explaining such as may be thought not clearly expressed, and of adding such as are necessary, for the preservation of the rights and happiness of the people. But the articles to be amended, and the amendments proposed, and such articles as are proposed to be added or abolished, shall be promulgated at least six months before the day appointed for the election of such convention, for the previous consideration of the people, that they may have an opportunity of instructing their delegates on the subject.

ARTICLES OF AMENDMENT.

ARTICLE 1. No person, who is not already a freeman of this state, shall be entitled to exercise the privileges of a freeman, unless he be a natural born citizen of this, or some one of the United States, or until he shall have been naturalized, agreeably to the acts of congress.

ART. 2. The most numerous branch of the legislature of this state shall here-

after be styled the House of Representatives.

ART. 3. The supreme legislative power of this state shall hereafter be exercised by a senate and the house of representatives; which shall be styled, "The General Assembly of the state of Vermont."—Each shall have and exercise the like powers in all acts of legislation; and no bill, resolution, or other thing, which shall have been passed by the one, shall have the effect of, or be declared to be, a law, without the concurrence of the other. Provided, that all revenue bills shall originate in the house of representatives,—but the senate may propose or concur with amendments, as on other bills. Neither house, during the session of the general assembly, shall, without the consent of the other, adjourn for more than three days, nor to any other place than that in which the two houses shall be sitting,—and in case of disagreement between the two houses, with respect to adjournment, the governor may adjourn them to such time as he shall think proper.

ART. 4. The senate shall be composed of thirty senators, to be of the freemen of the county for which they are elected, respectively, who are thirty years of age or upwards, and to be annually elected by the freemen of each county respectively. Each county shall be entitled to one senator, at least, and the remainder of the senators shall be apportioned to the several counties according to their population, as the same was ascertained by the last census, taken under the authority of the United States—regard being always had, in such apportionment, to the counties having the greater fraction.—But the several counties shall, until after the next census of United States, be entitled to elect, and have their senators, in the following proportion, to wit:—

Bennington county, two; Windham county, three; Rutland county, three; Windsor county, four; Addison county, three; Orange county, three; Washington county, two; Chittenden county, two; Caledonia county, two; Franklin county, three; Orleans county, one; Essex county, one; Grand Isle county, one.

The legislature shall make a new apportionment of the senators, to the several counties, after the taking of each census of the United States, or census taken for the purpose of such apportionment, by order of the government of this state, always regarding the above provisions in this article.

ART. 5. The freemen of the several towns in each county, shall annually give their votes for the senators, apportioned

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to such county, at the same time and under the same regulations, as are now provided for the election of councillors. And the person or persons, equal in number, to the number of senators apportioned to such county, having the greatest number of legal votes in such county respectively, shall be the senator or senators of such county. At every election of senators, after the votes shall have been taken, the constable or presiding officer, assisted by the selectmen and civil authority present, shall sort and count the said votes, and make two lists of the names, of each person, with the number of votes given for each annexed to his name, a record of which shall be made in the town clerk's office, and shall seal up said lists, separately, and write, on each, the name of the town, and these words, "Votes for Senator," or "Votes for Senators," as the case may be, one of which lists shall be delivered by the presiding officer, to the representative of said town, (if any) and if none be chosen, to the representative of an adjoining town, to be transmitted to the president of the senate; the other list, the said presiding officer, shall, within ten days, deliver to the clerk of the county court, for the same county, and the clerk of each county court, respectively, or in case of his absence or disability, the sheriff of such county, or in case of the absence or disability of both, the high bailiff of such county, on the tenth day after such election, shall publicly open, sort and count said votes, and make a record of the same, in the office of the clerk of such county court, a copy of which he shall transmit to the senate; and shall also, within ten days thereafter, transmit to the person or persons elected, a certificate of his or their election. Provided, however, that the general assembly shall have power to regulate by law, the mode of balloting for senators, within the several counties, and to prescribe the means, and the manner by which the result of the balloting shall be ascertained, and through which the senators, chosen, shall be certified of their election, and for filling all vacancies in the senate, which shall happen by death, resignation, or otherwise. But they shall not have power to apportion the senators to the several counties, otherwise than according to the population thereof, agreeably to the provisions, herein before ordained.

ART. 6. The senate shall have the like powers to decide on the election and qualifications of, and to expel any of its members, make its own rules, and appoint its own officers, as are incident to, or are possessed by, the house of representatives.

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A majority shall constitute a quorum. The lieutenant governor shall be president of the senate, except when he shall exercise the office of governor, or when his office shall be vacant, or in his absence; in which cases, the senate shall appoint one of its own members to be president of the senate, *pro tempore*. And the president of the senate shall have a casting vote, but no other.

ART. 7. The senate shall have the sole power of trying and deciding upon all impeachments;—when sitting for that purpose, they shall be on oath, or affirmation, and no person shall be convicted, without the concurrence of two thirds of the members present. Judgment, in cases of impeachment, shall not extend farther, than to removal from office, and disqualification to hold or enjoy any office of honor, or profit, or trust, under this state. But the party convicted, shall, nevertheless, be liable, and subject to indictment, trial, judgment, and punishment, according to law.

ART. 8. The supreme executive power of the state, shall be exercised by the governor, or in case of his absence or disability, by the lieutenant governor; who shall have all the powers and perform all the duties vested in, and enjoined upon the governor and council, by the eleventh and twenty-seventh sections of the second chapter [part the second] of the constitution, as at present established, excepting that he shall not sit as a judge, in case of impeachment, nor grant reprieve, or pardon, in any such case; nor shall he command the forces of the state in person, in time of war, or insurrection, unless by the advice and consent of the senate; and no longer than they shall approve thereof. The governor may have a secretary of civil and military affairs, to be by him appointed during pleasure, whose services he may at all times command; and for whose compensation, provision shall be made by law.

ART. 9. The votes for governor, lieutenant governor, and treasurer of the state, shall be sorted and counted, and the result declared by a committee, appointed by the senate and house of representatives. If, at any time, there shall be no election, by the freemen, of governor, lieutenant governor, or treasurer of the state, the senate and house of representatives shall, by a joint ballot, elect to fill the office, not filled by the freemen as aforesaid, one of the three candidates for such office, (if there be so many) for whom the greatest number of votes shall have been returned.

ART. 10. The secretary of state, and

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LEGISLATURE OF VERMONT.

all officers, whose elections are not otherwise provided for, and who, under the existing provisions of the constitution, are elected by the council and house of representatives, shall, hereafter, be elected by the senate and house of representatives, in joint assembly, at which, the presiding officer of the senate shall preside; and such presiding officer, in such joint assembly, shall have a casting vote, and no other.

ART. 11. Every bill, which shall have passed the senate and house of representatives, shall, before it become a law, be presented to the governor: if he approve, he shall sign it; if not, he shall return it, with his objections in writing, to the house in which it shall have originated; which shall proceed to reconsider it. If, upon such reconsideration, a majority of the house shall pass the bill, it shall, together with the objections, be sent to the other house, by which it shall likewise be reconsidered, and if approved by a majority of that house, it shall become a law. But in all such cases, the votes of both houses shall be taken by yeas and nays, and the names of the persons, voting for or against the bill, shall be entered on the journal of each house, respectively. If any bill shall not be returned by the governor, as aforesaid, within five days, (Sundays excepted) after it shall have been presented to him, the same shall become a law, in like manner as if he had signed it: unless the two houses, by their adjournment, within three days after the presentment of such bill, shall prevent its return; in which case it shall not become a law.

ART. 12. The writ of habeas corpus shall, in no case, be suspended.—It shall be a writ, issuable of right; and the general assembly shall make provision to render it a speedy and effectual remedy in all cases proper therefor.

ART. 13. Such parts and provisions, only, of the constitution of this state, established by convention, on the 9th day of July, one thousand seven hundred and ninety three, as are altered or superseded by any of the foregoing amendments, or are repugnant thereto, shall hereafter cease to have effect.

SECTION II.

Legislature of Vermont.

By the preceding section it may be seen that, previous to the amendment of the constitution in 1836, the government of this state approached very nearly to a pure democracy. The whole legislative power was vested in a house of representatives, chosen annually by the people;

but, as a check to hasty and injudicious legislation, each bill passed by the house was required to be submitted to the governor and council for their approval, or proposals of amendment; and if they disapproved of the bill, or proposed amendments, and the representatives did not concur with them, they had power to suspend the final passage of the bill till the next session of the legislature. Thus every bill, of which the governor and council disapproved, was, in effect, submitted directly to the people, and they had an opportunity of expressing their pleasure respecting it, in the selection of their representatives for the succeeding year. If the next house of representatives repassed the suspended bill, it then became a law without the concurrence of the governor and council.

The effect of the amendment of the constitution in 1836 was to dispense with the executive council, and establish, in its stead, a senate as a co-ordinate branch of the legislature; so that the legislative power is now vested in a senate of 30 members chosen by counties, and a house of representatives, consisting of one member from each organized town, all elected annually. Bills (with the exception of those for raising revenue, which must originate in the house of representatives,) may originate in either house, but no bill can become a law without the concurrence of a majority of both houses. And every bill thus passed by the two houses, before it becomes a law, must be submitted to the governor, who, if he approve, shall sign it. If not, he shall return it with his objections, to the house in which it originated, which house shall reconsider it and send it to the other house, and if a majority of both houses shall *repass* the bill, it shall then become a law without the governor's signature.

Previous to the year 1808, the legislature of Vermont had no fixed place of holding its sessions, but changed its place of meeting from town to town at its pleasure. But in 1808, a state house was erected in Montpelier, and since that period Montpelier has been the permanent seat of the government. For some time after the organization of the government, there were two or more sessions of the general assembly in each year, but for many years past there has been only one session annually, commencing on the 2d Thursday in October, and usually continuing from three to four weeks. The first general assembly met March 12, 1778, and the officers then appointed continued till October, when new ones were chosen.

Year.	Governor.	Lieut. Governor.	Treasurer.	Sec'y of State.	Speaker of H. R.	Clerk of H. R.
1778	T. Chittenden	Joseph Marsh	Ira Allen	T. Chandler	Nathan Clark	B. Baldwin
1778	"	"	"	Joseph Fay	T. Chandler	B. Woodward
1779	"	B. Carpenter	"	"	"	R. Hopkins
1780	"	"	"	"	"	"
1781	"	Elisha Payne	"	M. Townshend	Thos. Porter	"
1782	"	Paul Spooner	"	"	Incr. Mosely	"
1783	"	"	"	"	I. Tichenor	"
1784	"	"	"	"	Nathan Niles	"
1785	"	"	"	"	S. R. Bradley	"
1786	"	"	S. Mattocks	"	Gideon Olin	"
1787	"	Joseph Marsh	"	"	"	"
1788	"	"	"	R. Hopkins	"	S. Jacobs
1789	M. Robinson	"	"	"	"	"
1790	T. Chittenden	Peter Olcut	"	"	"	L. R. Morris
1791	"	"	"	"	"	Wm. Eaton
1792	"	"	"	"	"	"
1793	"	"	"	"	Daniel Buck	R. Whitney
1794	"	Jona. Hunt	"	"	"	"
1795	"	"	"	"	L. R. Morris	"
1796	"	Paul Brigham	"	"	"	"
1797	I. Tichenor	"	"	"	Abel Spencer	"
1798	"	"	"	"	Dan. Farrand	S. C. Crafts
1799	"	"	"	"	Amos Marsh	"
1800	"	"	"	"	"	N. Osgood
1801	"	"	Benj. Swan	"	"	James Elliot
1802	"	"	"	D. Wing, Jr	Abel Spencer	"
1803	"	"	"	"	T. Herrington	A. Haswell
1804	"	"	"	"	Aaron Leland	Martin Post
1805	"	"	"	"	"	"
1806	"	"	"	T. Leverett	"	"
1807	Israel Smith	"	"	"	"	"
1808	I. Tichenor	"	"	"	Dudley Chase	"
1809	J. Galusha	"	"	"	"	W. D. Smith
1810	"	"	"	"	"	"
1811	"	"	"	"	"	"
1812	"	"	"	"	"	"
1813	M. Chittenden	W. Chamberlain	"	J. Dunham	D. Chipman	"
1814	"	"	"	"	"	"
1815	J. Galusha	Paul Brigham	"	W. Slade, Jr	W. A. Griswold	"
1816	"	"	"	"	"	"
1817	"	"	"	"	"	"
1818	"	"	"	"	R. Skinner	"
1819	"	"	"	"	W. A. Griswold	"
1820	R. Skinner	Wm. Cahoon	"	"	D. A. A. Buck	"
1821	"	"	"	"	"	"
1822	"	Aaron Leland	"	"	"	T. Merrill
1823	C. P. Van Ness	"	"	N. Williams	G. E. Wales	"
1824	"	"	"	"	I. Fletcher	"
1825	"	"	"	"	D. A. A. Buck	"
1826	Ezra Butler	"	"	"	"	"
1827	"	Henry Olin	"	"	Rob. B. Bates	"
1828	S. C. Crafts	"	"	"	"	"
1829	"	"	"	"	D. A. A. Buck	"
1830	"	M. Richards	"	"	Rob. B. Bates	"
1831	W. A. Palmer	L. Egerton	"	T. Merrill	John Smith	Chas. Davis
1832	"	"	"	"	"	R. Pierpont
1833	"	"	"	"	"	"
1834	"	"	A. Clarke	"	E. N. Briggs	E. D. Barber
1835	no choice	S. H. Jenison	"	"	"	O. H. Smith
1836	S. H. Jenison	D. M. Camp	"	C. L. Knapp	C. Coolidge	A. L. Miner
1837	"	"	A. Wardner	"	Sol. Foot	"
1838	"	"	H. F. Janes	"	"	F. F. Merrill
1839	"	"	"	"	C. Coolidge	"
1840	"	"	"	"	"	"
1841	Chas. Paine	W. R. Ranney	J. Spalding	Alvah Sabin	C. Coolidge	F. F. Merrill

SESSIONS AND DEBENTURES OF THE GENERAL ASSEMBLY OF VERMONT.

Year.	Place.	Began.	Ended.	Debateure.	Year.	Place.	Began.	Ended.	Debateure.
1776 Windsor	Mar. 12	Mar. 26	15		1796 Vergennes	Oct. 11	Nov. 8	929	
" Bennington	June 4	June 18	15		1799 Windsor	Oct. 10	Nov. 5	927	
" Windsor	Oct. 8	Oct. 24	17		1800 Middlebury	Oct. 9	Nov. 7	930	9,106 98
1779 Bennington	Feb. 11	Feb. 23	13		1801 Newbury	Oct. 8	Nov. 6	930	10,967 64
" Windsor	June				1802 Burlington	Oct. 14	Nov. 12	930	11,483 41
" Manchester	Oct. 14				1803 Westminster	Oct. 13	Nov. 14	931	12,449 56
1780 Westminster	March			1,506 38	1804 Windsor	Jan. 26	Feb. 6	192	4,489 92
" Bennington	Oct. 12			1,178 44	" Rutland	Oct. 11	Nov. 9	930	11,007 52
1781 Windsor	Feb. 9			1,377 48	1805 Danville	Oct. 10	Nov. 8	930	12,057 26
" Windsor	Apr. 4			1,860 83	1806 Middlebury	Oct. 9	Nov. 11	931	12,727 68
" Bennington	June 13	June 23	17		1807 Woodstock	Oct. 8	Nov. 11	931	12,841 63
" Charlestown	Oct. 11	Oct. 28	18		1808 Montpelier	Oct. 13	Nov. 11	931	10,952 47
1782 Bennington	Feb. 6	Feb. 28	13		1809 "	Oct. 12	Nov. 8	928	10,973 04
" Windsor	June 13				1810 "	Oct. 11	Nov. 5	926	10,927 21
" Manchester	Oct. 10				1811 "	Oct. 10	Oct. 31	929	9,217 81
1783 Windsor	Feb. 13	Feb. 26	14		1812 "	Oct. 6	Nov. 9	933	13,067 42
" Westminster	Oct. 9	Oct. 28	20		1813 "	Oct. 14	Nov. 17	935	13,638 42
1784 Bennington	Feb. 19	Mar. 9	20		1814 "	Oct. 13	Nov. 11	930	12,177 06
" Rutland	Oct. 14				1815 "	Oct. 12	Nov. 13	933	13,129 60
1785 Norwich	June 3	June 18	16		1816 "	Oct. 10	Nov. 6	929	11,457 95
" Windsor	Oct.				1817 "	Oct. 9	Nov. 7	930	11,480 75
1786 Rutland	Oct.				1818 "	Oct. 8	Nov. 12	935	13,258 01
1787 Bennington	Feb. 16	Mar. 9	23		1819 "	Oct. 14	Nov. 17	935	13,110 71
" Newbury	Oct. 11	Oct. 27	17		1820 "	Oct. 12	Nov. 16	937	13,536 68
1788 Manchester	Oct. 9	Oct. 26	17		1821 "	Oct. 11	Nov. 16	937	13,521 78
1789 Westminster	Oct. 8	Oct. 26	19		1822 "	Oct. 10	Nov. 13	935	13,372 86
1790 Castleton	Oct. 14	Oct. 28	15		1823 "	Oct. 9	Nov. 7	930	12,057 81
1791 Bennington	Jan. 10	Jan. 27	18		1824 "	Oct. 14	Nov. 19	937	14,116 26
" Windsor	Oct. 13				1825 "	Oct. 13	Nov. 18	937	14,631 93
1792 Rutland	Oct. 11	Nov. 7	28		1826 "	Oct. 12	Nov. 16	936	14,622 96
1793 Windsor	Oct. 10	Nov. 4	26		1827 "	Oct. 11	Nov. 15	936	14,830 05
1794 Rutland	Oct. 9	Oct. 20	22		1828 "	Oct. 9	Oct. 31	923	10,616 19
1795 Windsor	Oct. 8	Oct. 27	20	5,190 42	1829 "	Oct. 8	Oct. 30	923	10,472 70
1796 Rutland	Oct. 13	Nov. 8	27	6,324 15	1830 "	Oct. 14	Nov. 11	929	12,443 20
1797 Rutland	Feb. 4	Mar. 10	35		1831 "	Oct. 13	Nov. 10	929	12,291 87
" Windsor	Oct. 12	Nov. 10	30		1832 "	Oct. 11	Nov. 9	930	12,750 56
1833 Montpelier	Oct. 10	Nov. 6	30	13,296 22	1834 "	Oct. 9	Nov. 7	930	12,737 87
" "	Oct. 8	Nov. 11	35	14,295 31	1835 "	Oct. 6	Nov. 10	931	14,295 31
" "	Oct. 13	Nov. 17	36	16,302 03	1836 "	Oct. 12	Nov. 12	931	12,613 02
" "	Oct. 11	Nov. 6	27	14,463 50	1837 "	Oct. 11	Nov. 6	927	11,463 50
" "	Oct. 10	Nov. 13	41	12,063 84	1838 "	Oct. 8	Oct. 30	923	13,016 69
" "	Oct. 14	Nov. 12	30						

VOTES FOR GOVERNOR OF VT.

AT SEVERAL PERIODS.

1800 Tichenor, 6,444	Smith, 3,229	Scattergood, 360
1804 Tichenor, 8,798	Robinson, 6,665	" 223
1809 Galusha, 14,583	Tichenor, 13,467	" 683
1811 Galusha, 13,829	Chittenden, 11,514	" 683
1812 Galusha, 18,156	Chittenden, 16,860	" 644
1815 Galusha, 16,050	Chittenden, 16,832	" 671
1816 Galusha, 17,823	Strong, 13,898	" 108
1817 Galusha, 13,756	Tichenor, 7,430	" 1,011
1819 Galusha, 12,028	Bradley, 1,035	" 246
1820 Skinner, 13,152	Scattergood, 934	" 2,057
1821 Butler, 8,866	Doddridge, 3,157	" 6,236
1830 Crafts, 13,476	Palmer, 10,223	Meach, 6,189
1831 Palmer, 15,256	Aiken, 12,990	Meach, 6,210
1832 Palmer, 17,318	Crafts, 16,489	Meach, 6,176
1833 Palmer, 20,565	Meach, 16,883	Seymour, 1,785
1834 Palmer, 17,131	Bradley, 10,583	Seymour, 1,159
1835 Palmer, 16,210	Bradley, 15,254	Palmer, 6,435
1836 Jenison, 20,470	Bradley, 16,124	Scattergood, 35
1837 Jenison, 22,960	Bradley, 17,730	" 8
1838 Jenison, 24,758	Bradley, 19,184	" 37
1839 Jenison, 24,611	Smith, 22,527	" 34
1840 Jenison, 23,433	Dillingham, 22,637	" 44
1841 Palmer, 23,563	Stout, 21,502	Hatch, 2,038

SECTION III.

Legislation and Laws.

The business of legislation was commenced in Vermont in 1778, but the laws passed that year were probably designed to be temporary, as no record of them is preserved. They are supposed to have consisted mostly of general enactments, such as declaring the laws "*as they stood in the Connecticut law book*," or, 'in defect of such laws, the plain word of God, as contained in the Scriptures,' to be the law of the land. In February, 1779, the legislature of Vermont enacted its first code of printed laws.* These were promulgated by a proclamation put forth by governor Chittenden on the 23d of February, commanding the people of the state "to take notice thereof and govern themselves accordingly."† These laws, although many of their provisions have been swept away by subsequent enactments, form the basis of the present statute laws of Vermont.

Since 1779, the acts of each session of the general assembly have been published, soon after the close of the session, in pamphlet form, and of these, there have been occasional revisions and compilations under the direction and authority of the legislature.

The first general revision of the laws of Vermont took place in 1787. These revised statutes were printed at Windsor, by Hough and Spooner, state printers, in a small folio volume, and reprinted at Bennington by Anthony Haswell, in 1791, in an octavo volume of 320 pages, together with the subsequent acts of the legislature up to that period. The second general revision of the laws took place in 1797. The committee appointed for that purpose consisted of Roswell Hopkins, Richard Whitney, Nathaniel Chipman and Samuel Hitchcock. The statutes reported by this committee were adopted by the legislature in February and March, 1797, and printed at Rutland by Josiah Fay, in 1798, in one octavo volume of 622 pages, together with an appendix of 206 pages.

In 1807, a compilation of the unrepealed laws of the state was made by Thomas Tolman, by order of the legislature, which was printed at Randolph, in 1808, by Sereeno Wright, in two volumes octavo, the first containing 504, and the second 534 pages. A third volume of 336 pages, embracing the public statutes from 1808 to 1816 inclusive, on the plan of the preceding, was published at Rutland in 1817, by Davison and Burt. In 1824, a new compilation, embracing all the public statutes then in force, together with brief no-

tices of private acts, was made by William Slade, Jr., and the whole comprised in one octavo volume of 756 pages, printed at Windsor, in 1825, by Simeon Ide. An additional volume of 228 pages, comprising the public acts from 1825 to 1834 inclusive, was compiled by Daniel P. Thompson, in 1834, and printed in 1835, at Montpelier, by Knapp and Jewett.

In 1837 the legislature passed an act authorizing the governor and lieutenant governor to appoint a committee of five persons to revise the statute laws of the state, and report the result of their labors to the legislature. The committee appointed in pursuance of this act consisted of Robert Pierpont, Samuel Swift, John Smith, Norman Williams, and Lucius B. Peck. In 1839, their report was laid before the legislature, and with some slight amendments was adopted as the Revised Statutes of the state. These revised statutes were printed at Burlington, by Chauncey Goodrich, in 1840, in one volume containing 676 large octavo pages.

Penal Laws. The penal laws of Vermont have experienced very considerable modification since the adoption of the first printed code in 1779. We have already seen that before the organization of the government of the state, whipping, or as it was technically termed, the application of the "*Beech Seal*," was the most common corporal punishment. The same, with several other relics of European barbarism, was retained for many years under the state organization. As a matter of curiosity, and to illustrate the change which has taken place in our penal laws, we have selected a few specimens from the laws of 1779.

In the law fixing the penalty for the crime of adultery, it is declared that "both the man and the woman shall be severely punished by whipping on the naked body, not exceeding thirty nine stripes, and stigmatized, or burnt on the forehead with the letter A on a hot iron: and each of them shall wear the capital letter A on the back of their outside garment, of a different color, in fair view, during their abode in this state. And as often as such convicted person shall be seen without such letter, and be thereof convicted before an assistant, or justice of the peace in this state, shall be whipped on the naked body not exceeding ten stripes."* Polygamy was punished in the same way. Incest was punished by sitting one hour upon the gallows with a rope about the neck,—by being severely whipped on the way from the gallows to the jail,—and by wearing the letter I in full view on the

* Slade's State Papers, p. 237—388. † Ibid. 388.

* Slade's Vt. State Papers, p. 290.

CRIMES AND PUNISHMENTS.

CAPITAL PUNISHMENTS.

outside of the outer garment.* Theft was punished by restoring three fold, by fine at the discretion of the court, and whipping, not exceeding thirty nine lashes; and when the offender was unable to make restitution, he was to be bound out to service for the payment of the same, together with the fine and damages.† Drunkenness, lying, and profane cursing and swearing, were punished by fine and sitting in the stocks.‡

Blasphemy and several other crimes, which are now punished by imprisonment, were formerly punished by death. Death was the penalty for counterfeiting or altering the Vermont bills of credit.‡ Counterfeiting the bills or coins of other states, horse stealing, and some other crimes were punished by branding on the forehead and cutting off the ears. But since the completion of the state prison in 1809, most of these sanguinary punishments have been laid aside, and imprisonment substituted in their place. The only crimes which are at present punishable with death, by the laws of this state, are murder, killing a person in a duel, perjury, in consequence of which life is taken, and arson, by means of which some person's life is destroyed. Manslaughter, the second conviction for burglary, and maiming by cutting out the tongue, putting out the eyes, &c., are punished by imprisonment at hard labor in the state prison for life, or for a term of years in no case less than seven. Arson without death, burglary, rape, robbery, perjury, forgery, theft, adultery, polygamy, incest, counterfeiting, swindling, and other high crimes, are punished by imprisonment at hard labor in the state prison not exceeding fifteen years, and by fine not exceeding \$1000, or either of said punishments in the discretion of the court. Minor crimes and misdemeanors are punished, either by fine, or imprisonment in the county jail, or both.

Since the establishment of the state prison, the annual number of commitments has been about 30; and much the greater part of these have been for theft. For the time elapsed, and in comparison with the population of the state, very few have suffered capital punishment by sentence of a court of civil law, only four executions having taken place since the organization of the government. The first was that of Cyrus B. Dean, who was executed at Burlington, on the 11th of November, 1808, for the murder of Jonathan Ormsbee and Asa Marsh, in the affair of the smuggling boat called the

Black Snake.* The second was that of Samuel E. Godfrey, at Woodstock, in 1818, for the murder of Mr. Hewlet, warden of the state prison. The third was that of Virginia, a colored man, at St. Albans, in 1820, for murder.

The fourth was that of Archibald Bates at Bennington, in February, 1839, for the barbarous murder of his sister-in-law, in Shaftsbury, by shooting her through the head with a rifle ball, as she was sitting in her room, nursing her babe, in the dusk of the evening. Bates aimed his rifle at her through the window, and the ball entered her forehead, killing her instantly.†

Two have died in prison while under sentence of death. One was a Mr. Anthony, at Rutland, who was sentenced to be hung for the murder of a Mr. Green, and who committed suicide by hanging himself in his cell the evening before the day arrived for his execution. The other was a Mrs. Peak, who was to have been executed at Chelsea, for administering poison to her husband, her husband's son and his wife, in consequence of which the son died, and the others narrowly escaped death. She died some days before the time fixed for her execution, under circumstances, which rendered it doubtful whether her death was occasioned by sickness or poison.

Previous to the organization of the government of the state, but after the constitution was adopted, there was one execution at Bennington for "enemical conduct." David Redding had been accused of supplying the enemy on the lakes with provisions, and was charged with several other acts unfriendly to the country. He was at first tried by a jury of six persons and convicted, and was sentenced to be executed on the 6th day of June, 1778. In the mean time John Burnham, an attorney at law, who had recently arrived from Connecticut, with Blackstone's commentaries in his saddle-bags, appeared before the council of safety and showed them that Redding's conviction had been irregular, inasmuch as no man could be legally convicted of a capital crime, but by the verdict of twelve jury-men. The council perceiving their error, granted a reprieve till the 11th of June.

The people had assembled in great numbers to witness the execution, and when it was ascertained that no execution was to take place, the crowd manifested much dissatisfaction, and fears were entertained that they might proceed to vio-

* Sted's Vt. State Papers, p. 291. † Ibid, p. 324.
‡ Ibid, p. 331. § Ibid. p. 426.

* See Part II. p. 95. † Not much to the credit of the public taste. the execution of Bates drew together a crowd estimated from 12,000 to 15,000 persons.

SUPREME COURTS.

COURT OF CHANCERY.

COUNTY COURTS.

lence against Redding, he having been convicted by public opinion as well as by a court and six jurors. Upon this Ethan Allen, who had just returned from his long captivity, mounted a stump, and exclaiming "attention the whole," proceeded to announce the reasons, which had produced the repressive—advised the multitude to depart peacefully to their habitations, and return on the day fixed for the execution by the council of safety, adding with an oath, "you shall see somebody hung at all events, for if Redding is not then hung, I will be hung myself."

The council of safety then appointed Allen to act as states attorney in the second trial of Redding, a jury of twelve men was summoned, who found him guilty, and he was executed on the 11th of June, as Allen had promised.



Vermont State House.

SECTION IV

Judiciary—Courts—Judges—Reports

The judicial powers of the state are vested in a supreme court, a court of chancery, a county court in each county, justices of the peace in the several towns, and a probate court in each probate district.

The supreme court consists of one chief justice and four assistant judges, any three of whom constitute a quorum. This court holds one session annually in each county and has exclusive jurisdiction of all such matters, not triable by jury, as may by law be brought before such court, and have power to issue and determine all writs of error, certiorari, mandamus, pro-

hibition and quo warranto, and all other writs and processes to courts of inferior jurisdiction, to corporations and individuals, that shall be necessary to the furtherance of justice and the regular execution of the laws. All issues of law, and all questions of law, arising upon the trial of any issue of fact, by the court or jury, and placed upon the record by the agreement of the parties, or the allowance and order of any two of the judges that attend the trial, determined by any county court, may pass to the supreme court for a final decision. Any party complaining of the final order or decree of the court of chancery may, by a written motion for that purpose, filed at the term in which such order or decree is made, appeal therefrom to the supreme court, excepting, 1st. When the bill is taken as confessed and a final decree made in consequence of the non-appearance of the defendant, or for the neglect of the defendant to make his answer agreeably to the rule or order of court. 2d. When the decree is for the foreclosure of a mortgage; unless by special permission of the court of chancery in consideration of the defence made. When an appeal from the court of chancery shall have been heard and determined, all the proceedings, together with the judgment, decree and order of the supreme court therein, and all things concerning the same, shall be remitted to the court of chancery, where such proceedings shall be thereupon had as may be necessary to carry such judgment, decree, or order into effect. The supreme court have jurisdiction of all questions of law, arising in the course of the proceedings of the county court in probate matters.

Each judge of the supreme court is a chancellor; and, within his judicial circuit, possesses, and may exercise, all the jurisdiction and powers, which now are, or hereafter may be, vested in a court of chancery.

For the purpose of holding county courts, the state is divided into five circuits, and one circuit assigned to each of the five judges of the supreme court, who act as chief judge, with two assistant county judges in each county, within his circuit.* The county courts have, in their respective counties, original and exclusive jurisdiction of all original civil actions, except such as are made cognizable by a justice, and of all such petitions as may, by law,

* The first circuit consists at present of the counties of Bennington and Rutland; the second of Windham, Windsor and Orange; the third of Addison, Chittenden and Grand Isle; the fourth of Washington, Caledonia and Essex; and the fifth of Franklin, Orleans and Lamoille.

JUSTICES OF THE PEACE.

PROBATE COURTS.

JUDGES OF THE SUPREME COURT.

be brought before such court, and appellate jurisdiction of all causes, civil and criminal, appealable to such court, and may render judgment thereon according to law. They also have original jurisdiction of all prosecutions for criminal offences, except such as are by law made cognizable by a justice, and may award such sentence as to law and justice appertains.

Justices of the peace within their respective jurisdictions, have power to try and determine all actions of a criminal nature, which are punishable by fine not exceeding ten dollars, and to commit to prison, or to bind over for trial, all offenders, whose crimes exceed their powers to try. They have original and exclusive jurisdiction in all civil causes, where the matter in demand does not exceed \$100, except in actions for slanderous words, false imprisonment, replevin above the sum of \$7, and where the title of land is concerned. They also have jurisdiction in actions of trespass on the freehold, where the sum in demand does not exceed \$20. The matter in demand, in an action on a note, shall be considered the amount of the note, deducting the endorsements, and, in actions on book account, the matter in demand shall be considered the debtor side of the plaintiff's book. No judgment rendered by a justice of the peace can be reversed by a writ of error, or certiorari, before the supreme court, but appeals may be had from the judgment of a justice to the county court by either party, if claimed within two hours after the rendition thereof, excepting where the judgment is rendered by nonsuit or default, when the amount stated in the note or account does not exceed \$20, and a few other cases provided for in the statutes.

For the due settlement of the estates of deceased persons, the state is divided into twenty probate districts, and a probate court established in each.* This court consists of one judge, who is elected annually by the legislature, and who is authorized to appoint a register of said court, whom he may remove at pleasure. Probate courts are required to be notified and held in each district as often as once in each month. All matters, originally within the jurisdiction of the probate court, may be carried to the county court by appeal, and from that to the supreme court, for the decision of questions of law.

The judiciary powers of the state are at present exercised by five supreme judges, twenty-eight county judges, twenty judges

of probate, and about three thousand justices of the peace, all of whom are appointed annually.

From 1778 to 1786 inclusive, the supreme court consisted of five judges; from 1786 to 1825, it consisted of three judges; in 1825, 1826 and 1827, of four judges; and since 1827, of five judges. The following is a list of the judges, who have occupied the bench of the supreme court:

Elected Oct. 1778.

Moses Robinson,
John Shepardson,
John Fassett, jun.
Thomas Chandler,
John Throop.

Oct. 1779.

Moses Robinson,
John Shepardson,
John Fassett, jun.
John Throop,
Paul Spooner.

Oct. 1780.

Moses Robinson,
Paul Spooner,
John Fassett, jun.
Increase Mosely,
John Throop.

Oct. 1781.

Elisha Payne,
Moses Robinson,
John Fassett, jun.
Bezaleel Woodward,
Joseph Caldwell.

Oct. 1782.

Moses Robinson,
Paul Spooner,
Jonas Fay,
John Fassett,
Peter Olcott.

Oct. 1783.

Moses Robinson,
Paul Spooner,
John Fassett,
Peter Olcott,
Thomas Porter.

Oct. 1784.

Paul Spooner,
John Fassett,
Nathaniel Niles,
Thomas Porter,
Peter Olcott.

Oct. 1785.

Moses Robinson,
Paul Spooner,
Nathaniel Niles,
John Fassett,
Thomas Porter.

Oct. 1786.

Moses Robinson,
Paul Spooner,
Nathaniel Niles,
Nathaniel Chipman,
Luke Knowlton.

Oct. 1787.

Moses Robinson,
Nathaniel Niles,
Paul Spooner.

Oct. 1788.

Moses Robinson,
Paul Spooner,
Stephen R. Bradley.

Oct. 1789-90.

Nathaniel Chipman,
Noah Smith,
Samuel Knight.

Oct. 1791-92-93.

Samuel Knight,
Elijah Paine,
Isaac Tichenor.

Oct. 1794-95.

Isaac Tichenor,
Lott Hall,
Enoch Woodbridge.

Oct. 1796.

Nathaniel Chipman,
Lott Hall,
Enoch Woodbridge.

Oct. 1797.

Israel Smith,
Enoch Woodbridge,
Lott Hall.

Oct. 1798-99-1800.

Enoch Woodbridge,
Lott Hall,
Noah Smith.

Oct. 1801-02.

Jonathan Robinson,
Royal Tyler,
Stephen Jacob.

Oct. 1803-4-5-6.

Jonathan Robinson,
Royal Tyler,
Theop. Herrington,
Oct. 1807-08.

Royal Tyler,
Theop. Herrington,
Jonas Galusha.

Oct. 1809-10-11-12.

Royal Tyler,
Theop. Herrington,
David Fay.

Oct. 1813-14.

Nathaniel Chipman,
Daniel Farrand,
Jona. H. Hubbard.

Oct. 1815.

Asa Aldis,

* Each of the six southern counties in the state is, at present, divided into two probate districts, and each of the eight northern counties constitutes one probate district.

SUPREME COURT JUDGES.

UNITED STATES COURTS.

VERMONT REPORTS.

Richard Skinner,
James Fisk.
Oct. 1816.
Richard Skinner,
James Fisk,
Wm. A. Palmer.
Oct. 1817-18-19-20.
Dudley Chase,
Joel Doolittle,
William Brayton.
Oct. 1821.
C. P. Van Ness,
Joel Doolittle,
William Brayton.
Oct. 1822.
C. P. Van Ness,
Joel Doolittle,
Chas. K. Williams.
Oct. 1823.
Richard Skinner,
Chas. K. Williams,
Asa Aikens.
Oct. 1824.
Richard Skinner,
Joel Doolittle,
Asa Aikens.
Oct. 1825-26.
Richard Skinner,
Samuel Prentiss,
Titus Hutchinson,
Stephen Royce, jun.
Oct. 1827.
Richard Skinner,
Samuel Prentiss,
Titus Hutchinson,
Bates Turner.
Oct. 1828.
Richard Skinner,
Samuel Prentiss,

Titus Hutchinson,
Bates Turner,
Ephraim Paddock.
Oct. 1829.
Samuel Prentiss,
Titus Hutchinson,
Chas. K. Williams,
Stephen Royce, jun.
Ephraim Paddock.
Oct. 1830.
Titus Hutchinson,
Chas. K. Williams,
Stephen Royce, jun.
Ephraim Paddock,
John C. Thompson.
Oct. 1831-32-33.
Titus Hutchinson,
Chas. K. Williams,
Stephen Royce, jun.
Nicholas Baylies,
Samuel S. Phelps.
Oct. 1834-35.
Chas. K. Williams,
Stephen Royce,
Samuel S. Phelps,
Jacob Collamer,
John Mattocks.
Oct. 1836-37-38.
Chas. K. Williams,
Stephen Royce,
Samuel S. Phelps,
Jacob Collamer,
Isaac F. Redfield.
Oct. 1839-40-41.
Chas. K. Williams,
Stephen Royce,
Jacob Collamer,
Isaac F. Redfield,
Milo L. Bennet.

When Vermont was admitted into the union in 1791, this state was constituted a district of the United States, and a United States' district and circuit court established here. Each of these courts hold two sessions annually. The district court sits at Rutland, Oct. 6, and at Windsor, May 24. The circuit court sits at Rutland, Oct. 3, and at Windsor, May 21. In September, 1801, the Hon. Elijah Paine resigned his seat in the senate of the United States and accepted the appointment of judge of the court for the district of Vermont, which office he has held from that period to the present time.

For many years after the organization of the judiciary of the state, no measures seem to have been taken for publishing reports of cases tried in our courts. Indeed it is only for about twenty years last past that we have any thing like full reports. The first reports of causes tried in the state were by the Hon. Nathaniel Chipman. They embrace causes tried in 1783, 1790 and 1791, and were published at Rutland in 1793. They were printed in a small duodecimo volume, and entitled Reports and Dissertations by N. Chipman. Only twenty-five cases were reported, which occupied less than half the volume, the remainder being made up of Dissertations and an appendix. Of these twenty-five cases, eleven were copied into the first volume of reports by Daniel Chipman. The next Vermont reports were those of the Hon. Royal Tyler in two volumes, the first printed in 1809, and the second in 1810.

REPORTS OF THE DECISIONS OF THE SUPREME COURT.

Title.	Reporters.	Where printed	By whom.	Vol.	Pa.	Year.
Reports and Dissertations,	Nath'l Chipman	Rutland	Anthony Haswell		296	1793
Tyler's Reports	Royal Tyler	New York	J. Riley	I	496	1809
Tyler's Reports	"	"	"	II	488	1810
Brayton's Reports	Wm. Brayton	Middlebury	Copeland & Allen		240	1821
Chipman's Reports	Dan'l Chipman	"	J. W. Copeland	I, II	640	1824
Aikens' Reports	Asa Aikens	Windsor	Simeon Ide	I	432	1827
Aikens' Reports	"	"	"	II	458	1828
Vermont Reports	The Judges	St. Albans	Jeduthan Spooner	I	518	1829
Vermont Reports	"	"	"	II	600	1830
Vermont Reports	"	"	"	III	621	1832
Vermont Reports	"	"	"	IV	652	1833
Vermont Reports	"	Middlebury	Knapp & Jewett	V	628	1834
Vermont Reports	"	"	"	VI	704	1835
Vermont Reports	"	"	"	VII	548	1836
Vermont Reports	"	"	"	VIII	526	1837
Vermont Reports	"	Burlington	Chauncey Goodrich	IX	444	1838
Vermont Reports	Geo. B. Shaw	"	"	X	621	1839
Vermont Reports	Shaw & Weston	"	"	XI	728	1840
Vermont Reports	Wm. Weston	"	"	XII	733	1841

SECTION V.

Council of Censors.

Under the provision of the 43d section of the constitution of the state, there has been a council of censors elected once in seven years, since the first adoption of that instrument. The *first* was elected in March, 1785. This council held three sessions; the first at Norwich on the 1st Wednesday of June, 1785, the second at Windsor on the last Thursday of September following, and the last at Bennington on the first Thursday of February, 1786. At these several sessions numerous resolutions were passed, expressive of objections to laws then in force, and recommending to the legislature their repeal, or modification, so as to render them more conformable to the humane principles laid down in the declaration of rights. They also proposed sundry alterations in the constitution, the most important of which was one limiting the whole number of representatives to 50, and providing for their election by county conventions, or by dividing the state into districts.* This recommendation was, however, not adopted by the convention assembled by order of this council of censors.

The *second* council of censors, elected in 1792, in their revision of the constitution, proposed so to amend it as to vest the legislative power in a senate and house of representatives, as co-ordinate branches of the legislature. All bills passed by the senate and representatives, before they became laws, were to be laid before the governor and council for their approbation. If not approved, they were to be returned, with the objections in writing, to the house in which they originated, and if, on reconsideration, both houses should repass the bill, it should then become a law without the approbation of the governor and council. This proposal was also rejected by the convention called to consider it. In their address to the freemen of the state, this council of censors say, that "In examining the proceedings of the legislative and executive departments of this government, during the last septenary, we are happy to find no proceedings which we judge unconstitutional or deserving of censure."

The *third* council of censors, elected in 1799, proposed no alterations in the constitution, and therefore called no convention. They, however, published an address to the people, in which they say that they consider the constitution susceptible

of improvement, but that "the present convulsed state of political opinion, renders the present an unsuitable period for entering on such an important business." They further say, "that in examining the procedure of the legislature during the last septenary, we are of opinion, that except in a few instances, they have conducted public concerns agreeably to the rules prescribed by the constitution." The exceptions here alluded to are, first, "an act directing the mode of election," &c. passed October 26, 1796, secondly, "an act relating to fines and forfeitures," &c. passed in March, 1797, and thirdly, "an act to support the gospel," passed October 26, 1797. These were all declared to be repugnant to the constitution and their repeal recommended.

But the matter upon which this council, in their address, animadverted most severely, was the proceedings of the assembly in the case of William Coley, the sheriff of Bennington county. The council charged said Coley with taking illegal fees; and by a communication to the assembly, during the October session in 1799, ordered his impeachment before the governor and council. Upon the reception of this order, the house of representatives, instead of submitting the matter to the governor and council, proceeded to investigate it themselves, and finally resolved that the charges were unsupported and that the order should be dismissed; thus assuming to themselves the power to try impeachments, which, by the constitution, was vested in the governor and council.

Of the *fourth* council of censors, elected in 1806, we are unable to give any account, not having succeeded in obtaining a copy of their journals.*

The *fifth* council of censors, elected in 1813, held two sessions, one at Montpelier in October, 1813, and the other at Middlebury in January, 1814. They proposed sundry amendments to the constitution, the most important of which related to a senate and to the judges of the supreme court. The senate, which they proposed, was to consist of 24 members, who should hold their office three years, and, of whom, one third should go out of office and their places be supplied each year. They proposed that the judges should continue in office during good behavior, but be removeable by a concurrent vote of two thirds of each of the two branches of the

* For an account of the proceedings of this council and their address, see Slade's Vt. State Papers, p. 571-544.

* It is a lamentable fact, that there is not, so far as we can learn, a complete set of the printed journals, either of the general assembly, or of the council of censors, to be found in any public library in the state—not even in the state library at Montpelier.

COUNCIL OF CENSORS

FROM THE FIFTH TO THE EIGHTH.

legislature. These and all the other amendments proposed were rejected by the convention called to consider them, by a vast majority. On the article providing for a senate in place of the council, the vote stood, yeas 20, nays 188.

In their review of the legislative proceedings, this council of censors say, "that, in general, the various departments and officers of government have, during the last septenary, in the exercise of their various functions, kept within the pale of the constitution." They then proceed to specify three acts passed the preceding year, which they deem exceptions to their general remark, and recommend their repeal. These were, first, "an act directing the deed of Job and Theoda Wood to be given in evidence," passed October 20, 1812; secondly, "an act to prevent intercourse with the enemies of this and the United States on the northern frontier," passed November 6, 1812; and thirdly, "an act suspending civil process against the persons and property of the officers and soldiers of this state while in service," passed November 6, 1812.*

The *sixth* council of censors, elected in 1820, held three sessions: the first in June, the second in October, 1820, and the third in March, 1821, all at Montpelier. This council of censors proposed so to alter the constitution as to make the council of the state consist of one member from each county, to be elected by the freemen of the county, and to make that council a co-ordinate branch of the legislature, having a negative upon the house of representatives. They also proposed so to apportion and reduce the number of representatives that they should never exceed 150. The judges of the supreme court were to be elected for seven years, but to be removable by a vote of two thirds of both houses in joint meeting. The convention called by this council met at Montpelier on the 21st of February, 1822, rejected all the proposed amendments by a vote of about *ten to one*, and dissolved February 23d, by adjourning without day.

In their review of the legislative proceedings, the subject upon which this council of censors animadverted with most severity, was the passage of private acts of suspension and insolvency, and acts granting new trials. This they regarded as an assumption of powers confided by the constitution to the judiciary department of the government and calculated to impair the obligation of contracts.

The *seventh* council of censors, elected in 1827, held three sessions; the first in

June, the second in October and the third in November, the two first at Montpelier and the last at Burlington. In their review of the legislative proceedings, they advert to the passage of acts of suspension and granting new trials as a violation of the constitution, and also express their conviction that the constitution is violated by permitting persons, holding offices under the United States, to hold offices at the same time under the authority of this state. This council proposed several amendments to the constitution, the most important of which was the creation of a senate, to consist of 28 members, to be chosen by counties, which should act with the house of representatives as a co-ordinate branch of the legislature. They called a convention, which met at Montpelier on the 26th of June, 1828, and, the next day, rejected by a large majority the articles proposed, (with the exception of *one* relating to the naturalization of foreigners, and which now constitutes the first article of amendment on page 115) and adjourned without day at 5 o'clock in the morning of the 28th.

The *eighth* council of censors, elected in 1834, held three sessions; the first in June, the second in October, 1834, and the third in January, 1835, the two first at Montpelier and the last at Middlebury. This council proposed nineteen articles of amendment to the constitution, chiefly relating to the establishment of a senate as a co-ordinate branch of the legislature. They called a convention, which met at Montpelier on the 6th of January, 1836, and, after mature deliberation, adopted twelve of the amendments proposed, which may be found in the first section of this chapter, beginning with the second article of amendment on page 115.

The amendments adopted were similar in principle to those proposed by several former councils and which were rejected by very large majorities, which shows that a very great change had taken place in public sentiment. The reasons of this change are undoubtedly to be found in the recent disputes between the executive council and house of representatives with regard to the extent of their respective powers. For a long time after the organization of the government, the executive council was composed of men who were regarded as fathers of the state, and for forty-five years after the adoption of the first constitution, they did *practically* exercise the powers of a co-ordinate branch of the legislature, and so long as the framers of the constitution, or their cotemporaries, continued to take part in the councils of the state, their constitu-

* See part second, page 94.

NINTH COUNCIL.

LIST OF CENSORS.

MILITIA.

tional right so to act was not seriously denied. But a collision at length arising between the council and house of representatives, inquiry was instituted with regard to the extent of their respective powers. The council claimed a parity of powers with the house, and this the house as resolutely denied. Notwithstanding the former practice, it was found that the literal construction of the constitution was in accordance with the views of the house, and, the council being thus shorn of the powers, which it had been so long permitted to exercise, and sunk into insignificance, the people were aroused to a sense of the necessity of some more effectual check upon the proceedings of the house of representatives, and the result was the establishment of a senate in 1836, as before stated.

The *ninth* and last council of censors, elected in 1841, held three sessions; the first in June, the second in October, 1841, and the third in February, 1842, the two former at Montpelier and the latter at Burlington. They have proposed seven articles of amendment to the constitution, and have agreed upon calling a convention to meet at Montpelier on the first Wednesday in January, 1843, for their consideration. The most important of these recommendations are, first, the extension of the term of service of the judges of the supreme court from one to seven years; secondly, the extension of the term of service of senators, from one to three years—one third of the whole number to be elected annually; and, thirdly, the giving the election of sheriffs and high bailiffs to the people of the respective counties, and the election of justices of the peace to the people of the towns in which they reside.

List of Councils of Censors.

The following is a list of the councils of censors, elected on the last Wednesday in March of each septenary:

1785.—Lewis Beebe, Jonathan Brace, Benjamin Carpenter, Ebenezer Curtis, Jonathan Hunt, Stephen Jacobs, Joseph Marsh, Ebenezer Marvin, Increase Moseley, Elijah Robinson, John Sessions, Micah Townsend and Ebenezer Walbridge.

1792.—Daniel Buck, — Bridgeman, Benjamin Burt, Elijah Dewey, Jonas Galusha, Anthony Haswell, Roswell Hopkins, Samuel Knight, Beriah Loomis, Samuel Mattocks, Elijah Paine, Isaac Tichenor and John White.

1799.—Elias Buel, Noah Chittenden, Elijah Dewey, Benjamin Emmons, David Fay, Lott Hall, Jonathan Hunt, Samuel Knight, John Leverett, Nathaniel Niles,

Moses Robinson, John White and John Willard.

1806.—Apollos Austin, Ezra Butler, Loyal Case, Isaac Clark, Josiah Fisk, Thomas Gross, Udney Hay, Wm. Hunter, S. Huntington, John Noyes, Mark Richards, Moses Robinson and James Tarbox.

1813.—Isaac Bailey, Nicholas Baylies, Solomon Bingham, Nathaniel Chipman, Ebenezer Clark, David Edmunds, Daniel Farrand, William Hall, jun., Luther Jewett, Chas. Marsh, Elijah Strong, Robert Temple and Isaac Tichenor.

1820.—Asa Aldis, Joel Brownson, Augustine Clarke, J. Cushman, Wm. Hunter, Jedediah Hyde, William Nutting, John Phelps, Joel Pratt, Charles Rich, Joseph Scott, Amos Thompson and J. Y. Vail.

1827.—Asa Aikens, Joel Allen, John W. Dana, Wm. Gates, Wm. A. Griswold, Jedediah H. Harris, Wm. Howe, Daniel Kellogg, O. Noble, Samuel S. Phelps, Leonard Sargeant, Bates Turner and E. P. Walton.

1834.—Joel Doolittle, Alvan Foote, Nathan Harmon, Robert Harvey, William Hebard, David Hibbard, jr., John Phelps, Joseph Reed, Stephen Robinson, Joseph Smith, E. H. Starkweather, Wm. Strong.

1841.—Heman Allen, Austin Birchard, Luther Carpenter, Martin, C. Deming, J. D. Farnsworth, Alvah R. French, David Hibbard, Willis Mott, Gordon Newell, Ephraim Paddock, John A. Pratt, Hezekiah H. Reed and Peter Starr.

SECTION VI.

*Militia of Vermont.**

With the exceptions mentioned below, the militia of Vermont consists of all the able-bodied white male citizens of the state between the age of 18 and 45 years. The exemptions from military service embrace ministers of the gospel, commissioned officers who have been honorably discharged, and such as may be so discharged after having served as commissioned officers for a period of five years, members of fire companies to the number of 20 to each engine, faculties and students of colleges and academies, judges of the supreme, county and probate courts, county clerks, registers of probate, sheriffs, deputy sheriffs, high bailiffs and constables, quakers, physicians, stated schoolmasters, ferrymen and millers.

The whole military force of the state, according to the return of the Adjutant and Inspector General for 1840, was 26,304, including officers and private soldiers. This force of which the governor is com-

* See Revised Statutes for 1839, page 554--600.

mander in chief, is divided into three divisions, with a major general to each division. Each division is divided into three brigades, with a brigadier general to each. Each brigade is divided into from two to four regiments, and each regiment is designed to consist of ten companies of 100 men in each. Each company is commanded by a captain and two lieutenants; each regiment by a colonel, lieutenant colonel and major; each brigade by a brigadier general, a brigade inspector, a quartermaster and one aid-de-camp; each division by a major general, a division inspector, a quartermaster and two aids-de-camp; and the whole by the governor as captain general, an adjutant and inspector general, a quartermaster general and two aids-de-camp. The adjutant and inspector general and the quartermaster general are appointed by the governor. The major generals and brigadier generals are appointed by the legislature; the colonels, lieutenant colonels, and majors are elected by the captains and lieutenants of their respective regiments; and the captains, lieutenants and non-commissioned officers of each company are elected by their respective companies. The militia of the state is at present divided into three divisions, nine brigades, twenty-eight regiments, including a rifle regiment, and two hundred and ninety companies. The regiments are numbered in regular progression from one up to twenty-eight.

On the first Tuesday of June in each year, every company is called together for the purpose of inspection, drill and discipline, and a return, of the name and equipments of each individual, made to the clerk of the town to which the company belongs; and once in three years, between the 5th of September and the 3d of October, the militia of the state may be assembled, for review, inspection and discipline, by regiment, or separate battalion, as the commandant of brigade shall direct. The commissioned and non-commissioned officers and musicians of each regiment are required to rendezvous two days annually, in their uniforms, for the purpose of training and improvement in military discipline. The poll of each person belonging to the militia, who is returned fully equipped, is exempted from all taxes, except the highway tax, and each officer, non-commissioned officer and musician is paid one dollar per day, and the adjutant and inspector general three dollars per day, for attendance at regimental drills.

The militia of Vermont, or Green Mountain Boys, as they have been more commonly denominated, have always been

proverbial for their intrepidity and valor. During the revolutionary war, they acted in proportion to their numbers a very conspicuous and important part, as the fields of Hubbardton* and Bennington† and the surrender of Burgoyne‡ bear witness. And when our country was invaded during the last war with Great Britain, their previous reputation was fully sustained by the promptness and bravery with which they met the enemy at Plattsburgh on the memorable 11th of Sept. 1814 ||



Flag §—The Flag or Ensign, of this state, as established by law, consists of thirteen stripes alternate red and white, and the Union one large star, white, in a blue field, with the coat of arms of the state of Vermont therein.

Champlain Arsenal—This is an establishment belonging to the United States, situated at Vergennes, and is rated and designated as an arsenal of the third class, "for the safe-keeping of arms and other ordnance stores." The land on which the public buildings are erected was purchased by the United States from E D Woodbridge, Esq., in two lots; the first lot of about ten acres, was purchased in 1816, and the second lot, about eighteen acres, in 1824. The location and general supervision of the buildings was assigned

* See part second, page 41. † Ibid. p. 43. ‡ Ibid. page 48. § Ibid. p. 86.

§ Through inadvertence, twice as many stripes were introduced into our figure of the Vermont Flag as there should have been, and the error was not discovered in season to have it re-engraved.

¶ These lots were severally ceded to the United States by the legislature of Vermont; the first in 1820, and the second in 1824.

CHAMPLAIN ARSENAL—

BUILDINGS, ORDNANCE, AND STORES.

to Major George Talcott of the United States ordnance, and in June, 1826, public notice was given by him, inviting proposals for furnishing materials for constructing a wharf, dwelling house, magazine and arsenal, upon the ground belonging to the United States. In August of the same year, Lieut. W. T. Willard was assigned as an assistant to Major Talcott, and took the charge and immediate superintendence of the public property and the workmen employed in the public service. The first appropriation made by congress for constructing public buildings was fifteen thousand dollars. In April, 1827, Lieut. Willard was relieved of the command of this post by Lieut. J. M. Washington, and during this and the following year the principal buildings were completed.

The following is a statement of the public land, buildings, &c. with their estimated value, as reported September 30, 1841, viz :

28 acres of land,	\$2,100
Arsenal, three stories high, 80 by 36 feet, built of stone and covered with slate,	9,000
Officers quarters, 36 by 30 feet, covered with slate, with frame kitchen and wood shed attached,	4,000
Magazine, 40 by 19, stone, covered with slate,	3,000
Gun house, 100 by 26 feet, built of wood,	1,000
Armorer's and carpenter's shop, 40 by 30 feet, built of wood, with two rooms furnished for quarters,	600
Laboratory, 26 by 19 feet, built of wood,	350
Blacksmith's shop, 20 by 14 feet, built of wood,	200
Barn, 38 by 28 feet, built of wood,	400
Ice house, built of wood,	50
Two cisterns, wharf, crane, fences, and other improvements,	2,675
Total,	\$23,375

A large portion of the ordnance stores now deposited at this arsenal, except small arms, were used at Plattsburgh during the last war with England. The amount of ordnance and ordnance stores on hand on the 30th September, 1841, was as follows, viz.—9 pieces brass cannon, 26 pieces iron cannon, 27 artillery carriages, 16,570 round shot and shells, 8,200 pounds grape shot, 4,077 muskets with bayonets, 401 rifles (Hall's patent) with bayonets, 500 sets infantry accoutrements, 48,638 pounds pig lead; also, a large quantity of artillery equipments, canister and strapped shot

and shells, cannon and musket powder, fixed ammunition for cannon and small arms, cartridge bags, laboratory paper and stores, musket and rifle flints, musket bullets, buck shot, &c. valued at \$82,878,56 Also, armorer's, carpenter's, smith's and laboratory tools and materials for use at the post, valued at 1,323,26

Recapitulation.

Value of public grounds, buildings and improvements,	\$23,375,00
Value of ordnance and ordnance stores,	82,878,56
Value of tools and materials,	1,323,27
	\$107,576 83

Lieut. Washington retained the command of the arsenal until January, 1833, and was succeeded by Lieut. D. H. Vinton; in November of the same year Lieut. Vinton was relieved by Lieut. Charles Ward, who commanded until March, 1836, and was succeeded by Capt. Allen Lowd. Capt. Lowd was relieved in September, 1837, by Lieut. J. B. Scott, who commanded until August, 1838, and was succeeded by Isaac H. Bogard, Esq. military store keeper. In December following, Mr. Bogard was relieved by Lieut. W. H. Fowler, and in June, 1830, Lieut. Fowler was relieved by Major Silas Halsey, military store keeper, who is the present commandant at that post.

Soon after the organization of the United States ordnance corps, in 1832, one blacksmith and two artificers were assigned to this post to be employed in cleaning and repairing small arms, preserving public property and other public services.

By special authority from the secretary of war, the government of the state of Vermont has permission to use a portion of one of the public buildings for storing state's property, and about 4,300 muskets, 80 rifles, and 3 six pounders, guns, belonging to the state of Vermont, are now deposited in the arsenal, valued at \$31,500.

The Champlain arsenal is the only military establishment of the United States within the limits of Vermont. During the colonial wars some military works were erected on the eastern shore of the lake, particularly a strong stone windmill on what was called Windmill point, nearly opposite to Crown point. During the revolution fortifications were erected upon Mount Independence, opposite to Ticonderoga, and during the last war with Great Britain, breast works were thrown up at Burlington and at the mouth of Otter creek, but no fortifications have ever been erected in Vermont, which were

VERMONT STATE HOUSE—

LOCATED AT MONTPELIER.

designed to be permanent. The post at the mouth of Otter creek was attacked on the 10th of May, 1814, by the British flotilla, consisting of five sail and eight row galleys, but they were repulsed without loss to the Americans. The American force consisted of only 190 men, commanded by Capt. Thornton of the artillery and Lieut. Cassin of the navy.



SECTION VII.

*Vermont State House.**

When Montpelier was made the Capital of the state, the inhabitants of the town and vicinity erected a State House, and gave it to the state. At the date of its erection, it was well adapted to the purpose of legislation, but as the state rapidly increased in population it was found after some years to be inadequate to the increasing wants of the legislature. Various propositions were made at successive sessions of the legislature to enlarge the building, but without effect. At the session of 1831, the attention of the members of the legislature was drawn to the subject of a new state house, by a design for one, made by Ammi B. Young, architect, and exhibited at Montpelier at that time. The design was much admired, and the legislature passed a resolution authorizing the appointment of a committee to receive proposals from the several towns in the state, to build a new state house, sufficiently commodious for all the purposes of state legislation, and to report to the next legislature. The Hon. Ezra Meech, Robert Temple, Allen Wardner, and Timothy Hubbard, Esqrs., were appointed said committee. This committee reported to the legislature at the session of 1833, that the citizens of Burlington had proposed to erect a state house at that

place, at a cost of \$30,000, provided that town, should be made the capital of the state; that the inhabitants of Montpelier and vicinity had proposed to give \$15,000 towards a new state house, to be erected on or near the site of the old one, at a cost of at least \$30,000; the above were the only proposals made. When the subject came before the legislature, it received a full and careful examination, and, in consequence, an act was passed, dated Nov. 8, 1833, 'authorizing the erection of a state house at Montpelier,' and making an appropriation of \$15,000 therefor, provided the inhabitants of Montpelier should guaranty to the state, the payment of an additional sum of \$15,000 towards the object. The act authorized 'the governor to appoint three suitable persons as a committee to fix on a place in Montpelier for erecting said state house, and to prepare plan for the same,' and to 'appoint some suitable person, or persons, as a committee to superintend the erection of said state house, agreeably to the plan adopted by the committee aforesaid.' The Hon. Samuel C. Crafts, Hon. Allen Wardner, and George T. Hodges, Esq., were appointed the first committee, and the Hon. Lebbeus Egerton was appointed to superintend the building.

The committee met at Montpelier and organized, but, before making much progress in their duties, they decided to visit Concord, N. H., Boston, Mass., Hartford and New Haven, Conn., in company with Ammi B. Young, the architect, whom they had employed to make their plans, for the purpose of examining the state houses in those places, and ascertaining what improvements had been made in such buildings up to that time. They were also accompanied by Gov. Egerton, the superintendent. After a full examination, and deliberation upon the subject, they adopted a plan designed and drawn by Mr. Young, which accorded with their views, and which appeared to be admirably and conveniently arranged for the purposes of legislation; they decided that the building should be located about 250 feet to the north west of the old state house, in order to allow a spacious yard and grounds in front, and that, so far as possible, the exterior should be of Barre dark granite. The roof and dome were to be covered with copper, and every part constructed in the most perfect and substantial manner; but, as they did not feel warranted in directing a greater expense for the building than \$60,000, without some further legislative action on the subject, they decided on a finish that would not exceed that sum, and made out a report to the

* For most of the facts and descriptions embodied in this section, I am indebted to the kindness of Ammi B. Young, Esq., the distinguished architect, under whose superintendence the state house was erected.

PROGRESS OF THE WORK.

next legislature, recommending the adoption of an improved finish for the building, and more in accordance with their views, but which would make the cost of the building about \$84,000.

The superintendent entered on his duties in February, 1833, at Montpelier, and engaged Mr. Young, the architect who drew the plans, &c. to superintend the carrying of them into execution. All the necessary contracts for lumber, brick, stone, labor, &c. were made during the winter, and April 1st, 1833, the excavations for the foundations, site, &c., were commenced. The foundations of the building lie entirely on a ledge of rocks, which in some places had to be removed to the depth of 25 feet to afford the proper level, and in others was so low as to require a wall of rough stone work of 20 feet in height. The work was pursued with vigor through the season, yet owing to the immense labor of removing the ledge of rocks for the site, only the foundations were laid and in condition to receive the hammered granite, most of which, for the body of the building, was wrought and delivered. The lumber for the building was also delivered, and every thing in connection with the business progressed with the utmost harmony and satisfaction. When the report of the committee, who prepared the plans for the building, came before the legislature at their session in 1833, the subject had another full and perfect examination; the doings of the committee were approved, and directions given to have all their views carried out in the most perfect manner, and another appropriation of \$20,000 was made towards the object. During the next season the walls of the building were erected, the frame of the roof put on, and further excavations on the site carried on. The legislature in the fall made another appropriation of \$25,000 for the object, and during the succeeding season the works were carried on with activity, and good progress made towards finishing the interior. In the fall of 1835 the legislature appropriated "the further sum of \$30,000 towards completing and furnishing the house, graduating the yard and making a fence around it." During the season of 1836, the building was mostly completed except the portico: the several halls and rooms were in part furnished with good and appropriate furniture, so that at their fall session, the legislature were enabled to occupy it, but owing to a misunderstanding between the superintendent and architect in relation to the design for finishing the yard and grounds, little or nothing was done in relation to them during that season.

EXPENSE OF BUILDING.

At the session of 1836, the legislature decided, that the services of the superintendent might be dispensed with, and passed an act, making it "the duty of the governor to appoint some suitable person duly qualified as an architect, to superintend the completion of the state house, and to procure such additional furniture as may be needed to furnish the same, to lay out and finish the yard and grounds around the house, and who shall supersede the committee heretofore appointed" to superintend the erection of said house, "and fulfil and perform all the duties incumbent on said committee." Agreeably to the provisions of the said act, the governor appointed Ammi B. Young, Esq. (the architect who had made all the plans and superintended their execution) to that office. The legislature made another appropriation of \$25,000 to carry on the work the next year, during which the building was all completed and furnished, and the grounds and yard nearly finished. At their session of 1837, the legislature made a further appropriation of \$3,500 to complete the yard and grounds, and previous to the session of 1838 the whole was finished, having been about 5½ years in its erection. On the settlement with the superintendent, it was found that the building, grounds, yard, furniture, &c. had cost the sum of \$132,077.23, from which deduct the \$15,000 paid by Montpelier, leaves \$117,077.23 as the sum paid by the state; this deducted from \$118,500, the whole amount appropriated, left in the treasury \$1,422.77 of the appropriations not expended.

The building stands on an elevated site, about 325 feet north of State street, on which it fronts, and is about 35 feet above the level of it. The entrance to the grounds, and principal approach to the house from that street, is noble and commanding; the gateways, the fence, the grounds, and all their details are in keeping with the building, and assist in giving to it that consideration it should have, as the capitol of a flourishing, independent state. The building is very neat and simple in its design, a pure architectural character is preserved throughout; this, combined with the convenience of interior arrangement, and the permanency of its construction, renders it a structure of more merit than any other in New England. It is in form of a cross, shewing in front a centre 72 feet broad, ornamented with a projecting portico of six columns, 6 feet in diameter, of the Grecian Dorick order, with its proper entablature and pediment extending the whole width of the centre, and two wings each 39 feet,

making the whole length 150 feet. The centre is 100 feet deep, and the wings 50 feet deep. To the apex of the pediment of the portico in the centre is 44 feet, and to the top of the dome 100 feet from the ground. The wings are 36 feet high. The walls of the exterior are of a beautiful colored granite, which shews the architectural details to great advantage, and the roof and dome are covered with copper.

The interior is entered in front from the portico, through a door 8 feet wide, into the entrance hall 32 by 38 feet, 14 feet high, the ceiling of which is supported by 6 Ionic columns, 18 inches in diameter; there is also an entrance from each end and rear of the building, communicating with the entrance hall, by corridors of proper width. In the lower story are offices for the Secretary of State, the State Treasurer, the Auditor of Accounts, and the Engrossing Clerk, the two first have fire proof safes attached to them. There are also in this story eleven committee rooms, and two rooms for furnaces to heat the halls, &c. in the principal story. To the right and left from the entrance hall two spacious stairways lead to two circular halls or landings in the second or principal story. These halls are 20 feet in diameter and 20 feet high, with domical ceilings, and communicate with the senate chamber and its gallery, the vestibule to the representatives' hall, the governor's room, the library, and several rooms for the officers of the senate, &c.; and they also communicate by stairways and galleries with the gallery to the representatives' hall and committee rooms in the attic. The vestibule to the representatives' hall is 18 by 36 feet and 18 feet high, and is square in plan. The representatives' hall is in form of the letter D, is 57 by 67 feet and 31 feet high, with domical ceilings. The senate chamber is elliptical on the plan, 30 by 44 feet and 22 feet high, with domical ceilings. The governor's room is square, 20 by 24 feet, 18 feet high. The library is 18 by 36 feet, 18 feet high, with gallery and shelves capable of holding 10,000 volumes. All the above rooms are finished in a neat and appropriate manner, the walls have an agreeable architectural ordonnance of columns, pilasters, niches, autac, &c. and their ceilings are pannelled in the simple and imposing stile of Grecian architecture. From the peculiar profile of the mouldings of the details of the ceilings, and the curves of the arches, the most beautiful gradations of light and shade are produced, from the brightest light to the deepest shade, so combined, as to give the greatest possible effect and beauty to the whole. The rooms are all

furnished in a neat and appropriate manner, with their proper furniture. The representatives' hall has hard wood desks and seats for the members, and the officers their proper desks and chairs. The governor's room and senate chamber are furnished with black walnut tables and chairs: and every thing is in perfect keeping throughout the house.

The building has been found to answer admirably well the purposes for which it was designed, and, at the session of the legislature in October, 1838, the following resolution was unanimously adopted: "*Resolved, by the General Assembly of the state of Vermont, That the thanks of this legislature be presented to Ammi B. Young, Esq. as a testimonial of their approbation of the taste, ability, fidelity and perseverance which he has manifested in the design and execution of the new capitol of this state; which will abide as a lasting monument of the talents and taste of Mr. Young as an architect.*"

The following are the sums appropriated and expended from the commencement to the completion of the State House.

Appropriated.	Date of App'n.	Expended	Up to.
\$ 30,000*	Nov. 8, 1832.	\$ 10,733 85	Oct. 12, 1833.
20,000	Nov. 7, 1833.	23,926 57	Sept. 30, 1834.
25,000	Nov. 4, 1834.	37,205 03	Sept. 30, 1835.
30,000	Nov. 10, 1835.	23,438 68	Sept. 30, 1836.
25,000	Nov. 7, 1836.	29,334 21	Sept. 30, 1837.
3,500	Nov. 1, 1837.	7,348 89	Oct. 7, 1838.
\$ 133,500 total app'n.		\$ 132,077.23 total expen's.	

* Of this sum, \$15,000 was paid by Montpelier.

SECTION VIII.

Banking and Banks.

In the present agitated state of the country on the subject of banking, a history of the origin and progress of a paper currency would doubtless be interesting and valuable; but for such an article we have neither materials nor room, and shall

OLD TENOR.

therefore confine ourselves principally to a brief account of banking operations in this state.*

* We have, doubtless, most of us heard our fathers or grandfathers speak of *Old Tenor* and of *Continental Money*, and as it will, doubtless, be gratifying to the rising generation to understand the meaning of these terms we will here endeavor to explain them.

OLD TENOR.

The first issue of paper money in America was made by the provincial government of Massachusetts in 1690, under the denomination of *bills of credit*, and for the purpose of defraying the expense of an expedition against Canada. As specie could not be had for that purpose, new issues were made from time to time for the redemption of these bills, and various other means were resorted to for sustaining their credit. By the laws of that province we find the following issues of bills of credit authorized, from 1700 to 1720, viz.: in 1702 £10,000, in 1703 £10,000, in 1714, 50,000, in 1717, 100,000, and in 1720 £50,000. In 1722 a law was passed making bills of credit a tender for ten years, and in 1722 the same law was continued for ten years longer. But, without an adequate specie basis, legislative enactments could not avail to sustain the credit of such an amount of paper money. Its value depreciated very rapidly till 45 shillings came to be the value of one dollar, at which it stood many years, and was denominated *Old Tenor*, (*old tender*;) in this, accounts were then kept and contracts were made.

The following bill may serve to illustrate this matter:

Boston, July 23d, 1768.

The Province of Massachusetts,

To THOMAS WILLISTON, Dr.

For sundries bought for the use of the gentlemen selectmen, in going down to Rainsford Island:

	£	s.	d.
Rump of Beef and pieces to roast,	5	0	0
Two Tongues,	1	10	0
Cucumbers, Mustard, Salt and Meal,	1	4	0
Bread and Biscuit,	2	15	0
Lemons, hundred and a half,	15	0	0
Two bottles of Claret and Cider,	3	15	0
Pipes and Tobacco,	1	0	0
Butter, Pork and Fat,	2	10	0
Onions and Pepper,	0	11	0
Sweet Majorum and Twine,	0	4	0
Cheese and Cayenne,	1	18	0
Spirits,	3	0	0
For roasting the Beef and Charcoal	1	5	0
Old Tenor,	£39	12	0
Lawful money,	£5	5	7

When these bills of credit were finally redeemed, by a grant made by the British parliament to defray the military expenses of the colonies, their value had so far depreciated that 11l. old tenor were considered equivalent to only 1l. in specie or lawful money.

CONTINENTAL AND LAWFUL MONEY.

The United States having no adequate sources of revenue, Congress found it necessary, in the early part of the revolution, to resort to the former practice of the colonies and make large issues of bills of credit. These at first possessed the same value as specie, and in these the troops and all the other expenses of the government were paid. But the United States not having the ability to redeem these bills with specie, they began, in the early part of the year 1777, to depreciate in value, and, before the close of the war, they became nearly worthless. These bills of credit constituted what was called *Continental Money*, and as this formed almost the entire circulating medium of the country during the revolution, bargains were very generally made and accounts kept in it during that period. After the

CONTINENTAL AND LAWFUL MONEY.

For many years after the organization of the government of this state, a large majority of the people were decidedly opposed to the issue of paper money; nor could they be brought to consent to the establishment of banks within the state till they felt themselves compelled to such a measure in self defence, in consequence of the great multiplication of banks in the neighboring states. While bank bills were the circulating medium in other states, it was found to be impossible to prevent their introduction here, and the consequence was that the people of Vermont suffered by being imposed upon by counterfeit bills and by the failure of banks, while neither the state nor any of its inhabitants shared any of the profit accruing from the banking operations. The only remedy, which they could devise for this evil, was to establish banks within the state, which should furnish to the people a medium of their own, similar to that possessed by other states, and serve as a guard against the circulation of spurious bills and the bills of insolvent foreign banks.

Though we had nothing which could

continental money began to depreciate in value, although accounts were still kept in it, the specie value was usually entered upon the account book under the denomination of *lawful money*, as in the following item copied from the account book of the first treasurer of this state:

1779. June 5.—To cash paid Reuben Dean for a Screw for a State Seal, Con. 9l.—Law. 0l., 16s., 4d.

By this item it appears that, at the time the charge was made, 11l. in continental money were valued at 1l. in specie. The rates of depreciation of continental money, in the several states, were in most cases fixed by law. That was the case in Vermont. In April, 1781, an act was passed, which declared that all contracts made on or before the first day of September, 1777, for money, shall be deemed equal to the same nominal sum in gold or silver; and that all contracts made between that period and the first day of September, 1780, is understood at the time to be for the common currency of the United States, shall be rated in specie agreeably to the following table, where the numbers denote the amount of continental money, to which \$100 in specie shall be equivalent on contracts made at the time, against which that amount stands.

Sept. 1, 1777,	\$100	April, 1, 1779,	800
Oct. do	110	May, do	800
Nov. do	120	June, do	1000
Dec. do	130	July, do	1100
Jan. 1, 1778,	140	Aug. do	1200
Feb. do	155	Sept. do	1300
Mar. do	170	Oct. do	1450
April, do	185	Nov. do	1600
May, do	200	Dec. do	1800
June, do	220	Jan. 1, 1780,	2000
July, do	240	Feb. do	2400
Aug. do	260	Mar. do	2800
Sept. do	295	April, do	3200
Oct. do	325	May, do	3600
Nov. do	360	June, do	4000
Dec. do	400	July, do	5000
Jan. 1, 1779,	450	Aug. do	6000
Feb. do	500	Sept. do	7200
Mar. do	550		

VERMONT BILLS OF CREDIT.

FAC SIMILE.

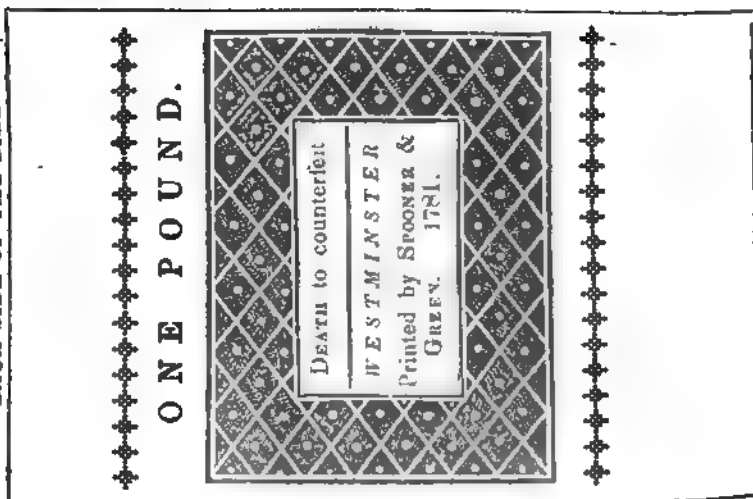
be called a bank previous to the establishment of the state bank in 1806, the legislature had once been obliged to follow the example of Congress and the neighboring states, and of the colonies for near one hundred years previous to the revolution, and resort to the issue of bills of credit. This was in April, 1781, and the objects and purposes of the act authorising the emission are declared in the preamble to be 'the carrying on of the war, the payment of the state debts and the enlarge-

ment of the quantity of circulating medium.' The bills were to be in equal numbers of the denominations of 'three pounds, forty shillings, twenty shillings, ten shillings, five shillings, two shillings and sixpence, one shilling and three pence and one shilling, and Matthew Lyon, Edward Harris and Ezra Styles, were appointed a committee to make a form and device for said bills and superintend the printing.' The following, except the signatures, is a *fac simile* of one of these bills:

FACE OF THE BILL.



BACK SIDE OF THE BILL.



VERMONT COPPER COINS.

REASONS AGAINST BANKING.

The amount authorised to be issued was \$25,155. The bills were to be redeemed by the treasurer of the state by the first of June, 1782, with specie, at the rate of six shillings for one Spanish milled dollar, or gold equivalent; and, for the purpose of raising the means for their redemption, a tax was laid, by the same act, of one shilling three pence on the pound, on the grand list of the state, to be paid in gold or silver, or the aforesaid bills. These were the only bills of credit ever issued by Vermont, and to the credit of the state it may be added, they suffered no depreciation and were all faithfully redeemed.

The above act, which may be found entire on the 424th page of the Vermont State Papers, closes as follows: "Be it further enacted, that whosoever shall be guilty of altering, or counterfeiting any of said bills, or shall be in any way concerned therein; by making instruments for that purpose, or be any ways aiding or assisting therein, and be thereof convicted, shall suffer death; any law, usage, or custom to the contrary notwithstanding."

During the great scarcity of money and the embarrassments which led to insurrectionary movements in 1786,* a class of the people were very clamorous for a bank, and flattered themselves that such an institution would relieve them from all their sufferings. Accordingly, at the session of the legislature in October, a resolution was passed submitting the question of the establishment of a bank directly to the people, by whom it was decided in the negative in January, 1787, by a large majority.† From that time the subject of

banks received but little attention for a number of years, and no serious efforts were made for the incorporation of banking institutions within the state till 1803. This year application was made for the establishment of a bank at Windsor and another at Burlington. After a long discussion, a bill passed the house of representatives in favor of the former by a vote of 93 to 83, and was sent to the governor and council for their concurrence, which they refused, and entered their reasons upon the journal of the assembly. As this document is illustrative of the views entertained by many of the leading men of the state at that period, we here lay it before our readers:

"Reasons of the Governor and Council for non-concurring in the Bill entitled an act to incorporate a Bank at Windsor in this State in 1803.

1. Because bank bills being regarded as money, and money like water always seeking its level, the bills put into circulation within this state must displace nearly the same sum of money now in circulation among us, and by driving it into the seaports, facilitate its exportation to foreign countries; which, as bank bills cannot be made a legal tender, must prove a calamity to the citizens generally, and especially to those who dwell at a distance from the proposed bank.

2. Because, by introducing a more extensive credit, the tendency of banks would be to paley the vigor of industry and to stupify the vigilance of economy, the only two honest, general and sure

* See part second, page 86.

† See part second, page 79 and 81. Although Vermont had no banks till many years after her admission into the union, yet she had exercised the powers of an independent government, and had authorized the coining of money long before that period. At the June session of the legislature in 1765, it appears that the legislature granted to Benson

Harmon, Jr., of Esport, the exclusive right of coining copper within this state for the term of two years from and after the first of July following. After much trouble and delay, he at length got his works in operation, and commenced the coining of coppers; and as these are rarely to be met with at the present day, we have present our readers with a fine specimen of one of the earliest coins issued:



At the October session in 1786, Mr. Harmon applied to the legislature and procured an extension of the time, for which he was to be allowed the exclusive right to coin coppers, to the period of eight years after the first of July, 1787. The weight of the pieces was fixed by law at 4 grs. 15 grs., and they were, after that period, to have on one side, a head with the motto *Austeritate Fortitudinem*, and on the other a woman, with the letters INDE-

ET LIB, for independence and liberty. Mr. Harmon, for his exclusive privilege, was, after the expiration of three of the eight years, to pay into the treasury of the state two and a half per cent. of all the copper he should coin during the remainder of the term, and enter into a bond of \$5000 with sufficient surety for the faithful performance of his trust.

REASONS AGAINST BANKING.

VERMONT STATE BANK.

sources of wealth. In this view, banks would tend to divert the attention of the speculator, the inexperienced youth, the indolent and incautious, from those honest, honorable and sure sources of mediocrity and independence, and to fix it upon imaginary and unjustifiable methods of suddenly accumulating an overgrown property; in pursuit of which, a large proportion of the adventurers would probably at the same time sacrifice the property with which they began their speculations, and imbibe an ungovernable disgust for wholesome industry and economy, now become more necessary than ever.

3. Because banks by facilitating enterprises both hazardous and unjustifiable, are natural sources of all that class of vices, which arise from the gambling system, and which cannot fail to act, as sure and fatal, though slow poisons to the republic in which they exist.

4. Because banks tend strongly to draw off the dependence of debtors from their own exertions, as means of payment, and to place it on the facility of increasing new debts to discharge the old, which cannot but be detrimental, both to the debtor, and through his example to society at large.

5. Because banks have a violent tendency, in their natural operation, to draw into the hands of the few a large proportion of the property at present fortunately diffused among the many; and, in this way, straiten the circumstances of the many, and thus to render them still more dependent on the few; and, of course, to make them, through necessity, yet more subservient to their aspiring views; and by these means, the tendency of banks seems to be, to weaken the great pillars of a republican government, and at the same time to increase the forces employed for its overthrow.

6. Because, as banks will credit none but persons of affluence, those who are in the greatest need of help cannot expect to be directly accommodated by them; and as the banks would enable those who have credit with them to loan money at an exorbitant interest to the necessitous, there is reason to fear lest they should operate as means of an increased usury and oppression.

7. Because, should the bill pass into a law, we apprehend it would be found necessary at least, to render the bank granted thereby perpetual; a measure which appears to us too important to be adopted without a more thorough investigation than the novelty of the question and the shortness of the time will allow.

8. Because by the establishment of

banks government would, in our opinion go farther than could have been contemplated in its original institution. Government, we apprehend, was not designed to open fields of speculation, nor to direct the efforts of individuals, but merely to protect them in respect of property, and such of their pursuits as are not inconsistent with the general good of the citizens at large; much less was it designed as a means of drawing property out of the hands of the less wealthy, to place it in the hands of the more wealthy."*

Notwithstanding the arguments here set forth, the clamor for banks still continued, and in 1805 two bills passed the house of representatives, one establishing a bank at Windsor, and the other at Burlington. These being non-concurred in by the council, a grand scheme was brought forward, which, many seem to have supposed, was to replenish abundantly the treasury of the state and the pockets of the people. This scheme was the establishment of a state bank, but the friends of the measure did not succeed in maturing their plans and carrying them into effect till the next year. In 1806 the business was entered upon in earnest, and on the 10th of November an act was passed establishing the Vermont State Bank. This bank at first consisted of two branches, one at Woodstock and the other at Middlebury. The next year two additional branches were established, one at Burlington and the other at Westminster. All the stock of this bank, and all the profits arising therefrom, were to be the property of the state, and all the concerns of the bank were to be under the control and direction of the legislature forever. The immediate management of the bank was to be committed to thirteen directors, to be chosen annually by the legislature, and who were to elect one of their number president of the bank.

The bank at length went into operation, but the anticipations of the people were not to be realized. What had appeared so fair and plausible in theory, was found to work very badly in practice, and, although a history of the Vermont state bank would afford an instructive lesson to the present and future generations, we have neither materials nor room for it here. Suffice to say, its affairs were soon found to be in inexplicable confusion, and the institution insolvent. Various acts of legislation were resorted to for sustaining it, notwithstanding which its condition grew worse and worse, and within five years from its establishment, affairs were

* Journal of General Assembly for 1803, p. 235.

BANKING OPERATIONS.

TABLE OF BANKS.

put in train for winding up its concerns. The legislature in 1811 passed an act directing the removal of the Westminster branch to Woodstock; and the next year, for the removal of the branches at Burlington and Middlebury to the same place, and also ordering all the bills of said bank to be burned, except what were necessary for the payment of checks due from the bank. In 1814 an act was passed ordering the treasurer of the state to burn all the bills of the state bank in his possession, excepting such sum as he deemed necessary to meet demands upon the treasury.

Since that period the outstanding bills have always been received for taxes, and in that way have nearly, or quite all, been called in and destroyed. The loss to individuals in consequence of the failure of the institution was trifling, but the loss to the state was very considerable.

In 1816, applications were made from

Burlington and Windsor for the incorporation of a bank in each of those towns. After considerable discussion the matter was referred to the next session of the legislature. At the session in 1817, the subject was called up and an act passed incorporating a bank at Windsor; but for some reason it did not go into operation, and at the session of the legislature in 1818 a new act of incorporation was obtained for a bank in Windsor, and a bank was also incorporated in Burlington. Since that period many other banks have been incorporated, most of which are now in operation, and their bills in good credit. Several of the bank charters have expired and been renewed, and some have been incorporated which have not gone into operation. Essex county bank forfeited its charter and was stopped; the bank of Windsor became insolvent and failed, and the bank of Bennington is also stopped.

The Banks in operation in 1841 are exhibited in the following table.

Name of the Bank.	Incorporated.	Expire.	Capital.	Paid in.	Notes dis't.
Bank of Burlington,	Nov. 9, 1818*	Jan. 1, 1849	\$ 150,000	\$ 150,000	\$252,043 02
Bank of Brattleboro',	Nov. 5, 1821	Jan. 1, 1837	100,000	75,000	123,539 28
Bank of Rutland,	Nov. 1, 1824	Jan. 1, 1856	100,000	100,000	156,899 91
Bank of Caledonia,	Nov. 1, 1825	Jan. 1, 1855	100,000	50,000	70,729 82
Bank of St. Albans,	Oct. 29, 1825	Jan. 1, 1855	100,000	50,000	113,120 71
Bank of Vergennes,	Oct. 27, 1826	Jan. 1, 1855	100,000	80,000	170,230 11
Bank of Orange co.,	Nov. 3, 1827	Jan. 1, 1843	100,000	70,000	126,097 72
Bank of Woodstock,	Nov. 3, 1831	Jan. 1, 1847	100,000	50,000	136,265 74
Bank of Middlebury,	Nov. 9, 1831	Jan. 1, 1847	100,050	60,000	92,673 87
Bank of Bellows Falls,	Nov. 9, 1831	Jan. 1, 1847	100,000	50,000	130,134 54
Bank of Manchester,	Nov. 7, 1832	Jan. 1, 1848	100,000	70,000	99,334 29
Bank of Newbury,	Nov. 7, 1832	Jan. 1, 1848	100,000	50,000	112,174 30
Bank of Orleans,	Nov. 8, 1832	Jan. 1, 1848	60,000	30,000	54,251 00
Farmers' bk.(Orwell,)	Nov. 7, 1833	Jan. 1, 1849	100,000	60,000	94,735 79
Farmers' and Mech's Bank,(Burlington,)	Nov. 4, 1834	Jan. 1, 1850	150,000	105,000	151,802 40
Bank of Montpelier,	Oct. 29, 1840	Jan. 1, 1857	75,000	37,500	86,197 50
Bank of Poultney,	Oct. 29, 1840	Jan. 1, 1858	100,000	50,000	67,288 66
			\$ 1,735,000	\$ 1,137,500	2,037,538 66

* In those cases where the time between the act of incorporation and the expiration of the charters exceed 18 years, the charters have been renewed.

Each of the above banks is managed by a board of five or seven directors, and six per cent. of the profits of each bank incorporated before 1830, and ten per cent. of those incorporated since that period is to be paid into the treasury of the state. Each bank, incorporated since 1830, is also required to pay annually into the treasury three fourths of one per cent. on the capital stock paid in until the amount paid shall be equal to 4½ per cent. upon the capital, which is to remain as a "bank fund" for the payment of the debts of the bank in case it shall become insolvent.

In 1840 the legislature passed a general act for the regulation of banks to be chartered or re-chartered within the state, and designed to secure the public against losses, by the mismanagement of these institutions. It provides for the appointment of a bank commissioner, who is authorized to examine the condition of the several banks, and institute proceedings against them in the court of chancery. In 1830 a branch of the U. S. bank was established at Burlington, which continued in operation till the expiration of the charter of that institution.

SECTION IX.

The Vermont State Prison.

On the 3d of November, 1807, the legislature passed an act providing for the appointment, by a joint ballot of both houses, of five commissioners, who should be empowered to fix upon a plan and place for a state prison, and superintend the erection and finishing of the same. The commissioners elected for this purpose were Ezra Butler, Samuel Shaw, John Cameron, Josiah Wright and Elihu Luce. They were directed to proceed in the discharge of the duties assigned them without unnecessary delay, and were authorized to draw upon the treasury of the state for any sum, not exceeding \$30,000, in carrying the designs of the legislature into effect.

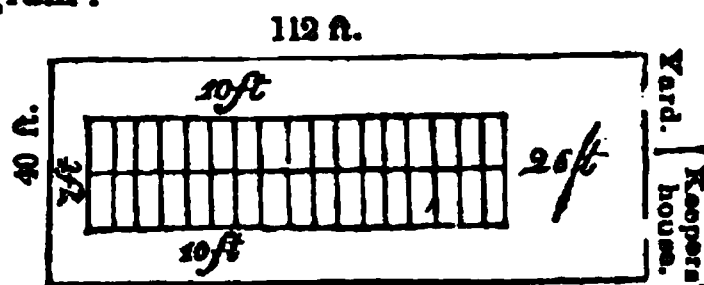
Having fixed upon Windsor as the location of the prison, the work was commenced in 1808 and was carried forward nearly to its completion in 1809. The original prison was built entirely of stone—was 84 feet long, 36 feet wide and three stories high. It was divided into rooms of various sizes, considered sufficient for containing with convenience and safety 170 prisoners. The outside walls of this prison are three feet thick and the partitions 18 inches; the doors of the lower story wholly of sheet and bar iron, firmly riveted together. The windows in the lower story are very small narrow apertures; those in the second story are a little larger; and those in the third story are much larger and grated. In the third story are rooms, which are used as hospitals for the sick.

Adjoining this prison, to the east, is a building of stone and brick, 54 feet long, 24 wide and four stories high, for the use of the keepers and guards. The basement story of this building was designed for a victualing room for the prisoners.

The yard commences at the northwest corner of the prison, extends west 24 feet, thence south 12 rods, thence east 16 rods, thence north 12 rods and thence west to the east end of the keepers' house. The walls of the yard are four feet thick at the base, and 20 feet in height above the surface of the ground; 14 of which are of hammered stone and the remainder of brick. The parts of the prison and of the keepers' house, which are next the street, are secured by a picket. Within the yard was erected a work-shop, principally of brick, 100 feet long, 24 wide and three stories high.

The foregoing constitute the principal original structures, erected and nearly completed in 1808 and 1809, and the

amount expended in their construction was about \$39,000. After that period, two other considerable buildings designed for store-houses and offices, were erected within the prison yard and various other improvements made previous to the erection of the new prison, for solitary confinement, in 1830. The new prison is 112 feet in length, and 40 in width. The cells for the confinement of the prisoners are situated in the central part of the building, surrounded by an open passage on all sides, as represented in the following diagram:



There are four stories of cells in the new prison, and 34 cells in each story, making in all 136 cells. This prison was commenced in 1830, finished in 1832, and cost \$8,000.

Most of the prisoners were at first employed in shoe making and in making nails and other smith work. After a while their business was changed to weaving cotton cloth, gingham, plaids, &c., and this was their principal employment for many years. At present the greater part of the convicts are employed in making Brogans.

The government of the prison was at first vested in a board of visitors, who appointed the subordinate officers, made the by-laws of the institution, and reported their doings to the legislature every year. After a while the board of visitors was abolished and the government vested in a superintendent, then in a superintendent and warden. But subsequently the office of warden was abolished and the government of the prison re-committed to the superintendent, who has the appointment of the guards and under officers, with the exception of the chaplain, who, like the superintendent, is elected annually by the general assembly. The superintendent is required to make an annual report to the legislature of his doings, and of the condition of the prison.

Of the six sentenced for life, four have been pardoned; the first in one year, the second in five years, the third in six years and the fifth in four years.

The first commitments to the state prison were made in 1809, and that year 24 convicts were entered. The following table exhibits the number of convicts committed each year from that time to the present, and various other particulars:

STATE PRISON STATISTICS.

REVENUE OF THE STATE.

STATISTICS OF THE VERMONT STATE PRISON.*

Year	Committ- ed.	Average Time.	Pardoned	Expire'd Service	Facing trial	Dead.	Total charged	Age under 31.	Between 31 & 50.	Age over 50.	Natives of Vt.	of other States.	Foreign- ers.	Committed for life.	During this pe- riod the average annual am't was about \$5,000.
1809	24	68						2	13	9	4	19	1		
1810	27	43	1		4	1		5	8	14	4	20	1		
1811	27	34	3	8			11	8	12	7	5	18	4		
1812	26	5	8	15			23	4	17	5	4	20	2		
1813	19		10	11		2	23		8	8	6	11	1		
1814	23	54	3	8		2	13	8	10	5	3	17	3		
1815	38	11	9	10		3	22	12	13	13	7	23	8		
1816	43	44	11	15	7			21	16	6	5	31	7		
1817	42	44	18	15			34	11	18	13	15	22	5		
1818	25	49	21	11	1		32	6	15	4	1	22	2		
1819	41	54	25	10				2	25	16		30	9	1	
1820	44	5	23	8	1	1	33	6	27	11	10	23	11		
1821	27	5	27	6		1	34	8	10	9	6	16	5	1	
1822	37	48	16	14		1	31		21	13	8	25	4		
1823	25	54	12	15		1	28	4	12	9	5	15	5		
1824	33	44	18	9		3	30	3	17	13	8	15	10	1	
1825	37	51	19	9		4	32	7	17	13	6	17	14	1	
1826	49	5	24	8		2	34	7	15	27	8	30	11		
1827	26	34	23	8			31	6	6	14	4	12	10		
1828	31	34	18	8		4	30	7	8	16	17	9	5	1	
1829	28	34	26	14			40	7	12	9	9	14	5		
1830	55	34	25	17	1	1	44	18	20	22	12	26	11		
1831	28	34	22	12			40	6	8	14	4	21	3		
1832	35	4	14	23		2	39	6	17	12	14	17	8		
1833	50	34	9	24		1	34	11	24	15	18	23	9		
1834	47	3	18	26	1	1	46	10	15	12	16	10	11		
1835	49	34	8	33		2	43	16	18	15	19	23	7		
1836	31	34	8	29			36	6	11	14	8	11	12		
1837	30	3	11	25		3	39	11	7	12	10	10	10		
1838	31	24	10	35		1	40	9	12	10	6	14	11		
1839	34	24	10	30			40	13	10	11	11	8	13	1	
1840	31	4	22			1	31	11	7	13	10	10	11		
1841	37	3	6	17			35	11	18	8	18		11		
Total	1122	31	464	519	16	37	1047	263	467	392	293	587	242	6	

SECTION X.

Revenue and Expenditures.

The revenue of Vermont is almost wholly derived from direct taxation. By the statute enacted in 1841,† the kinds of property, which are rateable, or subject to taxation, are designated, and this property is appraised at its cash value and set in the grand list at one per cent. of this value, and upon this the taxes are to be assessed. The expenses of the government have been very much enhanced during a few years past, in consequence of the erection of a new state house and the establishment of a senate. The following abstract of the treasurer's account for the political year ending September 30, 1841, exhibits the principal sources from which the treasury is supplied and the purposes for which disbursements are made:

* For these, I am indebted to F. W. Hubbard, Esq. the superintendent. † See part 2d, page 105.

Received into the Treasury.

For taxes, principal,	\$67,866 12
For interest on arrearages of taxes,	1,086 73
Of state's attorneys,	1,804 27
Of clerks of courts,	1,433 82
Principal paid on school fund notes,	1,688 08
Interest paid on " "	2,697 57
For pedlar's licences,	1,359 26
Of quarter-masters,	15 00
Of Messrs. Beach, on note,	26 40
Bank commissioners' fees,	124 00
Bank dividends for school fund,	4,683 73
From banks, for safety fund,	1,904 81
Interest on safety fund, loaned,	233 08
	\$84,922 87

Disbursements from the Treasury.

Due treasurer, Sept. 30, 1840,	\$9,539 33
Debiture of general assembly,	13,016 69

EXPENDITURES.

STATE DEBT.

SALARIES.

Debenture of electors of President, &c.,	120 00	To individuals for loans, principal and interest,	10,199 99
Canvassers of votes for President, &c.	320 38	Orders outstanding, probably	17,081 69
Sundry salaries,	8,301 86	Debentures for '41, probably	16,163 00
Supreme court orders,	23,602 43	Salaries due and unpaid,	1,000 00
Auditor's orders,	6,946 68		<hr/>
Commissioners of deaf and dumb,	2,299 10	To be deducted from this, there was at that time in the hands of state's attorneys and clerks, probably	10,000 00
Commissioners of blind,	729 41	Taxes due,	40,642 66
Trustees of insane hospital,	2,000 00	School fund loaned to individuals,	44,655 09
Superintendent of state prison,	3,000 00		<hr/>
For expense of military drills,	2,670 44		95,297 75
Appropriations by legislature,	2,571 18		
Interest on surplus money to towns,	824 89		
Interest on loans to the state,	1,556 49		
Cocoon and silk premiums,	1,246 78		
Fox certificates,	2,051 50		
Bear " "	253 00		
Wolf " "	60 00		
Crow " "	3 80		
For transporting weights, &c.	3 50		
For purchase of set of dry measures,	10 00		
Balance in the treasury,	3,794 81		
	<hr/>		
	\$84,922 87		

By the foregoing account it appears that about four fifths of the revenue received was from taxes raised on the grand list.

State debt.—If Vermont has been behind the neighboring states in great works of internal improvement, she has, in consequence, avoided the burden of an oppressive public debt. For the erection of her new state house, which is designed, not only for the present but for many future generations, she has judged it equitable that a portion of the expense should fall upon the future occupants, and not all be borne by the people during the short period in which it was built. She has therefore created a small public debt, which may, however, at any time be cancelled in the course of a few years by so slight an augmentation of the ordinary taxes as to be scarcely felt by the people.

From the report of the auditor of the treasury, it appears that the indebtedness of the state on the 30th of September, 1841, was as follows:

To school fund loaned the state, principal and interest,	\$119,637 19	Governor's salary,	\$750
To school fund loaned to individuals,	44,655 09	Judges of supreme court, (each)	1,375
To bank safety fund, principal and interest,	22,320 73	Treasurer and com. school fund,	500
To towns for surplus money and interest,	14,963 21	Secretary of state,	275
To bank for loans, principal and interest,	5,896 66	Secretary of the senate,	250
		Clerk of the House of Rep's,	275
		Secretary to the governor,	200
		Assistant secretary of the senate,	125
		Assistant clerk of the house,	125
		Engrossing clerk,	150

* On horseback and on foot were almost the only methods of traveling in those days. Carriages were scarcely known in the state.

FIRST ESTABLISHMENT OF SCHOOLS.

PRESENT SCHOOL LAW.

Librarian,	\$75	house, three dollars, and the Senators and
Superintendent of state prison,	500	Representatives, one dollar and fifty cents
Adjutant and inspector general,	250	per day, while attending the general as-
The President of the senate receives		sembly ; and they receive for travel each
four dollars per day, the Speaker of the		way ten cents per mile.

CHAPTER VIII.

EDUCATION AND LITERATURE IN VERMONT.

SECTION I.

Common Schools.

Few of the early settlers of Vermont enjoyed any other advantages of education than a few month's attendance at primary schools, as they existed in New England previous to the revolution. But these advantages had been so well improved, that nearly all of them were able to read, and write a legible hand, and had acquired sufficient knowledge of arithmetic for the transaction of ordinary business. They were, in general, men of strong and penetrating minds, and, clearly perceiving the numerous advantages, which education confers, they early directed their attention to the establishment of schools. But for many years there were obstacles, in addition to those incident to all new settlements, which prevented much being done for the cause of education. The controversies in which they were involved and the war of the revolution, both of which threatened the annihilation of Vermont as an independent state, and the ruin of many of the settlers by robbing them of their farms, employed nearly all their thoughts and all their energies, previous to their admission into the federal union.

The first general law in Vermont on the subject of primary schools seems to have been passed on the 22d of October, 1782. This law provided for the division of towns into convenient school districts, and for the appointment of trustees in each town for the general superintendence of the schools. It also provided for the election of a prudential committee by the inhabitants of each district, to which committee power was given to raise one half of the money necessary for building and repairing a school house and supporting a school, by a tax assessed on the grand

list, and the other half, either on the list, or on the polls of the scholars, as should be ordered by a vote of the district.

By the same act, the judges of the county courts were authorized to appoint trustees of a county school in each of their respective counties, and, with the assistance of the justices of the peace, to lay a tax on the same, for the purpose of building a county school house in each county. The part of this plan relating to county schools seems never to have been carried into effect ; but that in relation to town schools, was gradually introduced and improved, till schools, which may be called free, were established in all the organized towns in the state.

The several towns in this state are at present divided into school districts of convenient size, and the selectmen of each town are required by law annually to assess a tax of ~~three~~ cents on a dollar of the lists of the town for the support of schools within the same. One fourth part of the sum thus raised, together with one fourth of the avails of the deposit money, is required to be divided equally, on the 1st of March, among the school districts without regard to the number of children in each, and the remainder, among the districts in proportion to the number of children they contain between the ages of four and eighteen years ; provided that no district shall be entitled to a share in such money, which has not during the preceding year, kept a school, at least two months, with other moneys than those drawn from the town treasury, nor unless the moneys so drawn shall have been faithfully expended. The several school districts have the powers of a corporation and are authorized to raise money within the same, for the support of schools, either upon the grand list or upon the polls of the scholars.

EDUCATION IN VERMONT.

SCHOOL FUND.

In the several school districts in this state a male teacher is usually employed three or four months in the winter, and a female teacher about six months in the summer; and as the greater part of the money by which these schools are supported, is assessed upon the grand list, that is, upon the property of the district, the children of the poor enjoy, in them, the same privileges as the children of the rich; and these privileges have hitherto been so well improved, that a native of Vermont of mature age, who could not read and write, would be looked upon as a prodigy of stupidity.

The whole number of district and other elementary schools in Vermont, according to the returns of the census of 1840, was 2,402, and the number of children of suitable age to attend them 97,578. Several of these schools, situated in the villages, are supported by the tuition, charged upon the scholars, and some of these are of a higher order than the district schools generally. But while Vermont is not, perhaps, behind any of her sister states in the general intelligence of the people, we cannot help thinking that the general interests of education have, for several years past, been culpably neglected. While other states have been rapidly improving their schools and school systems, Vermont has remained nearly stationary. Large amounts of money are, it is true, annually raised and expended for the support of schools, but no means are provided by which it may be known whether these moneys have been advantageously expended or not. Nor is there any provision by which the defects of our present system or the improvements introduced in other states, are fairly presented to the legislature; and until these deficiencies are supplied, enlightened and useful legislation upon the subject of education cannot be expected.

There seems to be in Vermont a very general misapprehension of the subject of education, and, particularly, with regard to the relative importance of the different grades of literary institutions. While some look upon our universities and colleges, and others upon our academies and high schools as more particularly deserving the patronage of government, the great mass of the people seem to have persuaded themselves that the elementary schools are the only institutions for which the legislature is bound to make any provision at all. The indulgence of such partial views has had a tendency to produce an array of hostility among institutions, which are designed to form one harmonious whole, and which are abso-

lutely necessary for the prosperity and perfection of each other. The improvements, which are introduced into our universities and colleges, tend directly to the improvement of our academies by furnishing them with competent teachers; and the improvements in the academies are in the same way reflected back upon the elementary schools. While on the other hand the improvement of the elementary schools increases the number of pupils, who will avail themselves of the higher advantages of the academies, and these in their turn are enabled to furnish an increased number of students to the colleges. From this reciprocal dependence of the different grades of schools upon one another, it appears plain that, in order to secure and advance the interests of one, we should aim at nothing less than the interests of the whole. To accomplish then the great and desirable end of education in this state, we must adopt a *system of education*, which shall embrace all our literary institutions. We must have too a more efficient *supervision of education*; and must provide for bringing annually before the legislature the true condition of all our seminaries—and then, and not till then, will the government be enabled to act intelligently in this business and extend its patronage to all in due proportion.

School Fund. In November, 1825, the legislature of this state passed an act, the object of which was to create and establish a fund for the benefit of common schools. By this act all the avails of the late Vermont state bank, the sums derived from the six per cent. on the net profits of existing banks, all sums arising from assessments for licences to pedlars, and all other sums which shall be appropriated by the legislature for that purpose, were set apart as a fund for the support of schools in the several towns in this state. The treasurer of the state is constituted commissioner of this fund, and it is made his duty to loan it, or invest it in productive stocks. This fund is to go on accumulating from the above mentioned sources and by the addition of the annual interest, until the annual interest shall be sufficient to defray the current expenses of keeping a good free common school in each district, for the period of two months.

The amount of this fund on the 30th of Sept., 1841, according to the report of the auditor of the treasury, was as follows:

On loan to the state,	\$94,829 31
Interest on the same,	24,807 88
On loan to individuals,	40,551 03
Interest on the same,	4,104 06

Making in the whole, \$164,292 28

Deposit Money.—In 1837, congress made provision for the deposit of the surplus revenue, which had accumulated principally from the unprecedented sales of public lands, with the several states of the union in proportion to the whole number of senators and representatives from each. This was to be distributed in four quarterly instalments in the year 1838. The three first of these were paid over to the states, but before the payment of the fourth, the current receipts of revenue were found to be insufficient for carrying on the government, and congress ordered an indefinite suspension of its payment. The whole amount of the instalments deposited with the states was \$28,101,644 97, and the share of this which fell to Vermont was \$669,086 74. This sum was, by an act of the legislature, distributed among the several towns of the state in proportion to their population. The towns were to loan this money on sufficient security and apply the annual interest to the support of schools in the same, to be divided in the same manner as that raised by the three per cent. assessment on the grand list. The several towns are accountable to the state for the

return of the moneys received, or parts thereof, whenever it shall be required by the treasurer of the state, on the requisition of the United States, or for the purpose of a new division. The annual interest on the deposit money in this state is about \$40,000, which if equally distributed among the school districts would give to each about \$20.

SECTION II.

Academies and High Schools.

Besides the elementary schools which are established by law in all parts of the state, there are in most of the counties several schools of a higher order, denominated county grammar schools, high schools, or academies. In these are taught the higher branches of English studies, the mathematics and the elements of the Latin and Greek languages, and here youth are prepared for mercantile and other business, for teaching, or for admission into college, or the university. The following is a list of the institutions of this kind which have been incorporated at different times in this state :

<i>Name, or Title.</i>	<i>Location.</i>	<i>Incorporated.</i>
Clio Hall,	Bennington,	November 3, 1780.
Windsor County Grammar School,	Norwich,	January 17, 1785.
Rutland County Grammar School,	Castleton,	October 15, 1787.
Athens Grammar School,	Athens,	November 3, 1791.
Cavendish Academy,	Cavendish,	October 26, 1792.
Caledonia County Grammar School,	Peacham,	October 27, 1795.
Addison County Grammar School,	Middlebury,	November 8, 1797.
Franklin County Grammar School,	St. Albans,	November 4, 1799.
Montpelier Academy,	Montpelier,	November 7, 1800.
Windham Hall,	Newfane,	October 31, 1801.
Chittenden County Grammar School,	Waterbury,	November 3, 1801.
Brattleborough Academy,	Brattleborough,	November 4, 1801.
Dorset Grammar School,	Dorset,	November 9, 1804.
Vermont Academy,	Rutland,	October 29, 1805.
Essex County Grammar School,	Guildhall,	November 8, 1805.
Randolph Grammar School,	Randolph,	November 8, 1805.
Brandon Academy,	Brandon,	November 6, 1806.
Dorset Academy,	Dorset,	October 26, 1807.
Royalton Academy,	Royalton,	November 11, 1807.
Franklin County Grammar School,	Fairfield,	November 4, 1808.
West Rutland Academy,	West Rutland,	November 1, 1810.
Addison Literary Society,	Addison,	November 1, 1810.
Newton Academy,	Shoreham,	October 21, 1811.
Union Academy in Hubbardton,	Hubbardton,	October 26, 1812.
Chester Academy,	Chester,	October 30, 1814.
Wallingford Academy,	Wallingford,	November 9, 1814.
Windsor Female Academy,	Windsor,	November 10, 1814.
Arlington Academy,	Arlington,	November 29, 1817.
Union Academy,	Bennington,	October 30, 1817.
Thetford Academy,	Thetford,	October 29, 1819.
Poultney Female Academy,	Poultney,	November 11, 1819.
Bradford Academy,	Bradford,	November 2, 1820.
Vergennes Academy,	Vergennes,	October 24, 1822.

ACADEMIES AND GRAMMAR SCHOOLS.

UNIVERSITY OF VERMONT.

<i>Name, or Title.</i>	<i>Location.</i>	<i>Incorporated.</i>
Windsor Female Academy,	Windsor,	October 24, 1823.
Concord Academy,	Concord,	November 5, 1823.
St. Johnsbury Female Academy,	St. Johnsbury,	November 27, 1824.
Hinesburgh Academy,	Hinesburgh,	November 12, 1824.
Columbian Academy,	Windsor,	November 15, 1826.
Townshend Academy,	Townshend,	November 15, 1826.
Jericho Academy,	Jericho,	October 28, 1828.
Vermont Classical High School,	Castleton,	October 29, 1828.
The Female School Association,	Middlebury,	October 22, 1828.
The Burr Seminary,	Manchester,	October 28, 1829.
Craftsbury Academy,	Craftsbury,	October 29, 1829.
Burlington High School,	Burlington,	October 22, 1829.
Lamoille Academy,	Johnson,	November 8, 1832.
Troy Conference Academy,	Poultney,	October 25, 1834.
Leland Classical and English School,	Townshend,	October 31, 1834.
Black River Academy,	Ludlow,	October 23, 1834.
Georgia Academy,	Georgia,	November 5, 1838.
Enosburgh Academy,	Enosburgh,	October 23, 1839.
Hartford Academy,	Hartford,	October 29, 1839.
Phillips' Academy,	Danville,	October 21, 1840.

Many of the institutions named in the preceding list have ceased to exist. Of most of those, which are at present in operation, some account will be found in the Gazetteer under the names of the towns in which they are located.

The greater part of the academies and high schools in this state are without funds, or endowment, and depend entirely upon the charge for tuition for their support. In most of the grants of townships made by the government of Ver-

mont, it is true, there was a reservation of one right of land for the support of a grammar school, or academy, in the county in which they were situated, but as less than one half of the townships in the state are Vermont grants, and these are situated in the northern and central mountainous parts, much of the land thus reserved is of little value. They, however, in several of the counties, afford considerable assistance in sustaining the schools to which they belong.



Original University Building.

SECTION III.

University of Vermont.

The establishment of a university in Vermont engaged the attention of several of the leading men in this state from the first organization of the government in 1778, and in the subsequent grants of townships, one right of land was reserved in each for its support. The

quantity of land thus reserved amounted to about 29,000 acres, scattered through about 120 towns and gores, and lying chiefly in the northern part of the state; but nothing further was done towards the establishment of a university till some time after the close of the revolution. When Dartmouth college was brought within this state by the union of 16 towns from New Hampshire with Vermont,* the general assembly voted to take that institution under its patronage.† In June, 1785, after the final dissolution of the union of a part of New Hampshire with Vermont, the legislature of Vermont, 'under a consideration of the importance of those institutions to the world at large and to this state in particular,' and on application of President Wheelock, made a grant of a township‡ of land to Dartmouth college and Moor's charity school. Encouraged by this success, the trustees of Dartmouth college, the next year, applied for the sequestration to their use of the

* See page 54. † Slade's State Papers, page 273.

‡ This was the township of Wheelock, which see in part third.

UNIVERSITY INCORPORATED.

BUILDINGS ERECTED.

UNIVERSITY SUSPENDED.

lands which had been reserved, in the New Hampshire grants, for the propagation society and for glebes, and in the Vermont grants for academies and a university, giving assurance that they would on their part take the business of education in Vermont under their especial charge and supervision.

This application produced considerable discussion and tended to arouse some of the leading men in the state to the importance of setting about the establishment of a college or university, which the state could call her own. In 1785, Elijah Paine of Williamstown presented a memorial to the legislature, offering to give £2,000 for the establishment of a college, on condition that it should be located in that town. But the subject was postponed, and the legislature could not be brought to take the matter into serious consideration till the October session in 1789. The subject, however, had been freely discussed in the public papers, and at this session a memorial was presented by Ira Allen, with an offer of £4,000 by himself and of £1,650 more by other individuals, for the establishment of a college, to be located at Burlington. With the view of ascertaining what part of the state would afford the most liberal support to an institution of this kind, after a long discussion, agents were appointed in the several counties to obtain donations and subscriptions. Nothing further was done by the legislature till 1791. This year the subject was again called up, and it was finally decided that a college or university should be established. The next business was to fix upon its location. Several places were proposed, and, the ballots being taken, the result was as follows: 89 for Burlington, 24 for Rutland, 5 for Montpelier, 1 for Danville, 1 for Castleton, 1 for Berlin and 5 for Williamstown. Having fixed upon the location and the trustees whose names were to be inserted in the charter, the bill incorporating *The University of Vermont*, was passed without opposition, and became a law on the 3d of November, 1791.

In 1794 the corporation commenced clearing the lot of land fixed upon as the site of the university, and that year erected and nearly finished a large and commodious house, designed for the use of the president of the institution, and for the accommodation of a few students until the college edifice should be completed. In the spring of 1800, the corporation contracted for 300,000 bricks, which were delivered upon the ground during the next winter, and early in the spring of 1801 the building was commenced, and was car-

ried forward to its completion as rapidly as the nature of so important an undertaking would permit. This building, which was of brick, and a figure of which stands at the head of this article, was in the form of a cross; was 160 feet long, 75 feet wide in the central part, and 45 on the wings, and was four stories high, with halls in each story running through the whole length of the building and across each wing. It contained a chapel and six other large public rooms and 46 rooms for students. The cost of this building was estimated at about \$35,000, the greater part of which was contributed in Burlington and vicinity.

In 1799, the Rev. Daniel C. Sanders opened a preparatory school in the house which the corporation had erected, and the next year he was appointed president of the university, and several young gentlemen entered upon a collegiate course of studies. The first commencement was held in 1804. During the war with Great Britain the operations of the university were much embarrassed and finally suspended. In the summer of 1813, large quantities of arms belonging to the United States, were deposited in the university building without the consent of the faculty, or the corporation, and a guard of soldiers stationed there, which did much injury to the building, destroyed the fences and very much interrupted the collegiate exercises. In March, 1814, General Macomb applied to the corporation for the rent of the building for the use of the American army, plainly intimating that, if they did not consent to such a measure, he should be under the necessity of taking forcible possession of it. Under these circumstances, a committee of the corporation entered into an arrangement with the agents of the government by which they agreed to rent the building to the United States for \$5,000 a year, and on the 24th of March, the corporation, among other things, resolved, "That the regular course of instruction in the university be and hereby is suspended, and that those officers of college, to whose offices salaries are annexed, be dismissed from their offices respectively."

On the return of peace in 1815, the university building was evacuated by the army, and measures were immediately taken by the corporation for resuming the regular collegiate course of instruction. On the 15th of March they elected the Rev. Samuel Austin president of the university, and during the following summer the buildings were put in complete repair at an expense of about \$4,500. President Austin was inaugurated on the 26th of

INSTRUCTION IN THE UNIVERSITY RESUMED.

UNIVERSITY EDIFICE BURN'T.

July, and on the same day the Rev. James Murdock was elected professor of the learned languages, the Rev. Ebenezer Burgess, professor of mathematics and natural philosophy, and Jairus Kennan professor of chemistry and mineralogy. Instruction was commenced on the first Wednesday of September following, and from that period the number of students gradually increased, and the prospects of the institution improved for several years. But the affairs of the university becoming embarrassed in consequence of judgments being unexpectedly obtained against it, on some long standing claims, Dr. Austin resigned the presidency on the 21st of March, 1821. The regular course of instruction was continued till the commencement in Aug. when the Rev. Daniel Haskel, one of the settled ministers in Burlington, was appointed president *pro tempore* till a president should be chosen, but the prospects of the institution became so dark and unpropitious that the acting college faculty were authorized to suspend instruction in the institution whenever they should think proper. Accordingly, soon after the commencement of the fall term of 1821, public notice was given in the chapel, that the operations of the university would be indefinitely suspended from and after the close of that term, and the students were advised not to abandon their collegiate course, but complete it in connexion with some other institution.

The Phi Sigma Nu society, composed of students and graduates of the university, had at this time a very respectable library, and the question now arose, what disposition shall be made of this? There was at this time a considerable number of graduates of the university, who were honorary members of the society, residing in Burlington, who were anxious that the books should be so left that they could have the use of them during the suspension of the university. A portion of these resided near the university, and another portion in the lower part of the town; the former wished the books to remain in the university building where they were, while the latter wished them removed into their neighborhood. This matter was discussed with much warmth by the honorary members for several successive evenings, till at length the ordinary members, who possessed the constitutional right to provide for the safe keeping of the library, becoming weary of the debate, voted that the books should be boxed up and placed in the hands of Dr. N. R. Smith, one of the professors of the university, for safe keeping.

The question with regard to the disposition of the society's library being thus settled, a consultation was had by the graduates present with regard to the anticipated suspension of the university, and it was unanimously resolved that an effort should be made to prevent such a calamity. A committee was accordingly appointed by those present for the purpose of carrying the resolution into effect; and their efforts were attended with so much success, that, before the students dispersed, the notice of the suspension was recalled, and the Rev. Daniel Haskel being chosen president, and James Dean professor of mathematics, on the 22d of November, the institution was enabled to proceed without interruption, and confidence in its permanence and ultimate prosperity was rapidly restored.*

At the time of Mr. Haskel's election, the number of students in the university was reduced to 22; but, by his efficient labors, they were rapidly increased, and, in the beginning of 1824, they amounted to about 70. But the days of darkness and calamity were not yet ended. On the 27th of May, of this year, the noble college edifice was accidentally consumed by fire and with it a portion of the library and apparatus. Nor was this calamity the last, or the heaviest. The deep anxiety and arduous duties devolved upon president Haskel, produced, during the summer, a mental aberration, which rendered him incapable of discharging the duties of his office. Thus were the fair and flattering prospects of the university again involved in gloom and disappointment. But the friends of the institution were not discouraged. Before the succeeding commencement in August, the citizens of Burlington had subscribed more than \$8,300 towards the expense of erecting new buildings; and at the meeting of the corporation, at that time, it was resolved to proceed in the erection of the same, and Luther Loomis, George Moore and Wm. A. Griswold were appointed a committee for that purpose. The Rev. Willard Preston was chosen president, and rooms for the students and for recitation being provided in private houses, the course of instruction proceeded without interruption, while contracts were completed and arrangements made to proceed without delay in the erection of the new buildings.

The plan adopted embraced *three* buildings; the two outer ones, each 75 feet long, 36 feet wide and three stories high, were

* Thus it would seem that as the gabbling of geese once saved Rome, so the babbling of sophomores and others saved the university.

NEW BUILDINGS ERECTED.

commenced in the spring of 1825, and finished in the course of that and the following year, at an expense of \$10,000, which was nearly all subscribed by the inhabitants of Burlington and the immediate vicinity. The corner stone of the south building was laid on the 29th of June, 1825, by General La Fayette, and the ceremony was accompanied by suitable religious exercises.* Each of these buildings contains 24 convenient rooms for students. The third, or central building, was erected and nearly finished in 1829, and cost about \$9,000. It stands between the other two, is 86 feet long, has a projection in front and rear, and is surmounted by a dome. This building contains the public rooms, consisting of a chapel, museum, library, apparatus room, societies' halls and rooms for recitation. All these buildings are substantially built of brick and covered with tin, and are furnished throughout with stoves.

The medical faculty was not fully organized in connection with the university till 1822, and in the fall of this year was given the first full and regular course of medical lectures. From that time there was for several years an annual course of lectures, which were attended by a respectable number of students. The number admitted during this period to the degree of M. D., may be seen in the following catalogue. In 1829, a building was erected at the south end of college green, which contains the chemical laboratory of the university and commodious rooms for chemical, anatomical and other lectures. The regular course of medical lectures was kept up till 1833, when they were suspended, and have not since been resumed.

Mr. Preston resigned the presidency of the university in 1826, and was succeeded by the Rev. James Marsh, who resigned that office in 1833, and the Rev. John Wheeler was elected to supply his place. At the period last mentioned, an effort was made to relieve the university of its embarrassments, and in the course of 1833 and '34 an available subscription was raised for the institution of \$26,000. This was principally expended in the purchase of a choice library and apparatus, and in the payment of debts of the university. From that period the condition and prospects of the institution have greatly improved.

* This stone is situated in the north west corner of the building and has upon it the following inscription:

Laid by
Gen. LA FAYETTE,
June 29, 1825.

FUNDS, LIBRARY AND SOCIETIES.

Funds and support. These consist in lands, the charges for tuition, and occasional subscriptions. The lands given by the state for the support of the university, amounting to about 29,000 acres, afford at present an annual income to the institution of about \$2,500. The remaining part of the support is derived principally from the charge for tuition and room rent.

In 1839, the Hon. Azarias Williams of Concord, in this state, in consideration of the payment of certain debts and of an annuity of \$400, to be paid to him during his life, deeded to the corporation of the university of Vermont, all his large landed property. The lands thus deeded amount to about 15,000 acres in this state, besides a considerable quantity lying in other states. The lands in Vermont consist of a farm of 400 acres in Concord, valued at \$6,000, and of detached parcels and lots scattered through the different towns in the northern part of the state. On account of the annuity and the expenses required in putting these lands in an available condition, the corporation at present derive no benefit from this accession to their property, but its ultimate value to the institution is estimated at about \$25,000.

Library. The library of the university consists of about 8,000 volumes, and, in proportion to its size, will not suffer in comparison with any other library in the country. The books were mostly purchased in Europe, and they consist, to a very great extent, of the best editions of the most rare and expensive works.

Societies. There are four permanent societies connected with the university. These are the Phi Sigma Nu, the University Institute, the College of Natural History, and the Society for Religious Inquiry. The two first have respectable and well selected libraries, that of the Phi Sigma Nu consisting of 1500 volumes, and that of the Institute of 1200. The room fitted up for the museum of the College of Natural History is large and commodious and the collections respectable, particularly in the departments of conchology and mineralogy.

Admission. Candidates for admission to the university must produce satisfactory testimonials of a good moral character, and sustain before one or more of the faculty an approved examination in the following studies:—Common Arithmetic, Elements of Algebra, Elements of Ancient and Modern Geography, English, Latin and Greek Grammar, and be able to translate with facility Jacob's Greek Reader, and six books of Homer's Iliad; Jacob's Latin Reader, Sallust or Cæsar's

COURSE OF STUDIES.

Commentaries, Cicero's Select Orations and Virgil. The authors here mentioned are preferred; but the amount of knowledge will be regarded rather than particular books from which it has been acquired. Those, who propose to pursue a partial course of study, will be examined in those studies which are necessary to a successful prosecution of their proposed course.

The regular seasons for the admission of students into the university are on the day preceding commencement, and that preceding the first day of the autumnal term.

The parents or guardians of such as become members of the university, or the students themselves, are required to pay the term bills, from year to year, in advance, or give bonds to the treasurer for the payment of the same.

COURSE OF STUDIES.

Freshman Class.

*Fall Term.**—Algebra, Herodotus, Livy, Greek and Latin Forms. *Summer Term.*—Geometry, (plane and spherical,) Herodotus, Livy, Tacitus, Roman Antiquities.

Sophomore Class.

Fall Term.—Tacitus, Odyssey, Plane and Spherical Trigonometry, Conic Sections. *Summer Term.*—Surveying, Navigation, Projections, Differential and Integral Calculus, Quintilian, Greek Orators.

Junior Class.

Fall Term. Horace, Thucydides, Statics, Danyemics. *Summer Term.*—Latin Drama, Greek Drama, Hydrostatics, Hydraulics, Chemistry, Galvanism and Electricity, Magnetism, Electro-Magnetism with experiments.

Senior Class.

Fall Term.—Physiology, Psychology, Logic, Crystallography, Higher Mathematics, Astronomy. *Summer Term.*—Astronomy, Metaphysics, Moral Philosophy, Principles of Government, Rhetoric, Fine Arts, Evidences of Natural and Revealed Religion.

Frequent exercises in Elocution, Composition and Translations are required through the whole course. Instruction is given in French during the last two years. Biblical instruction is given on the Sabbath. During the two last years private classes may be formed in Hebrew, German, Italian, or Spanish Languages. Lectures are given in Natural Philosophy, Natural History, Chemistry, &c.

Commencement is on the first Wednesday in August. There are two vacations—one of four weeks from the com-

mencement; the other of eight weeks from the first Wednesday in January.

The students are examined, at the close of each study, by the faculty; and also annually by the faculty and a committee, during the three weeks immediately preceding commencement, in all the studies pursued under the direction of the faculty. The examinations are intended to be exact and thorough, and in each case the attainments of every student are noted and recorded.

The text books in the department of languages, though more numerous than in most colleges, are not more expensive, as the cheap German editions are used. Entire authors are preferred to collections of extracts. The use of these, it is believed, furnishes an inducement to the student to retain his classics, and to pursue the study of them beyond the immediate demands of the recitation room.

CATALOGUE

OF ALUMNI AND HONORARY GRADUATES.

[*Note.*—In the following catalogues, those who have died are designated by a *. The names of ministers in the list of graduates are in *italic.*]

Elected.		<i>Presidents.</i>	
1800	Rev. Daniel C. Sanders, D. D.	1814	
1815	*Rev. Samuel Austin, D. D.	1821	
1821	Rev. Daniel Haskel, A. M.	1824	
1825	Rev. Willard Preston, A. M.	1826	
1826	Rev. James Marsh, D. D.	1833	
1833	Rev. John Wheeler, D. D.		

Corporation.

1791	Rev. Caleb Blood,	1808	
1791	*Rev. Bethuel Chittenden,	1803	
1791	*Rev. Asa Burton, D. D.	1810	
1791	*Hon. Ira Allen,	1796	
1791	*Hon. Jonathan Arnold,	1796	
1791	*Hon. Enoch Woodbridge, A. B.	1805	
1791	*Hon. Samuel Hitchcock, A. B.	1813	
1791	*Hon. Jonathan Hunt,	1807	
1793	*Joshua Stanton, Esq.	1802	
1799	Rev. D. C. Sanders, D. D.	<i>Prest.</i> 1814	
1800	*Wm. C. Harrington, Esq.	1809	
1801	David Russell, Esq.	1810	
1802	*Hon. Amos Marsh, A. M.	1811	
1802	*Hon. Martin Chittenden, A. B.	1813	
1802	*Hon. Royal Tyler, A. M.	1813	
1804	*Rev. Publius V. Booge, A. M.	1810	
1804	Rev. Leonard Worcester, A. M.	1810	
1804	Rev. Henry Green, A. M.	1813	
1807	*Hon. Daniel Farrand, A. B.	1810	
1807	John Pomeroy, M. D.	1810	
1810	Hon. Samuel C. Crafts, A. M.	1818	
1810	Hon. J. D. Farnsworth, M. D.	1818	
1810	*Hon. Ezra Butler,	1816	
1810	*Hon. Pliny Smith,	1816	
1810	Rev. A. Bronson, A. M.	1816	
1810	Hon. Wm. A. Griswold, A. M.	1819	
1810	Hon. James Fisk, A. M.	1813	
1810	Hon. Titus Hutchinson, A. M.	1825	

* The *Fall Term* embraces the months of September, October, November and December. The *Summer Term*, the months of March, April, May, June and July.

CORPORATION.		OFFICERS.	PROFESSORS.		
1810	Hon. Wm. C. Bradley, A. M.	1816	1817	Hon. Timothy Follett, A. M.	1823
1811	Rev. Jonathan Going, D. D.	1819	1823	John N. Pomeroy, A. M.	1826
1812	Hon. Heman Allen, A. M.		1826	G. W. Benedict, A. M.	1834
	(of Highgate)	1816	1834	Hon. Alvan Foote, A. M.	
1812	*Wm. C. Harrington, Esq.	1813	Treasurers.		
1813	Hon. Truman Chittenden,	1839	1791	*Hon. E. Woodbridge, A. B.	1800
1813	Hon. Heman Allen, A. M.		1800	*Wm. C. Harrington, Esq.	1809
	(of Burlington,)		1809	David Russell, Esq.	1811
1813	John Pomeroy, M. D.	1822	1811	*Ozias Buell, Esq.	1832
1813	Rev. Willard Preston, A. M.	1815	1832	Hon. Timothy Follett, A. M.	1834
1814	*Rev. Asa Lyon, A. M.	1821	1834	G. W. Benedict, A. M.	1839
1815	*Rev. Henry Green, A. M.	1821	1839	David Read, A. M.	
1815	*Rev. John Fitch, A. B.	1816	Librarians.		
1815	*Rev. S. Austin, D. D., Prest.	1821	1833	F. N. Benedict, A. M.	1836
1816	*Hon. Martin Chittenden, A. B.	1818	1836	Rev. Joseph Torrey, A. M.	1841
1816	William Nutting, A. M.		1841	Henry Chaney, A. M.	
1816	*Jabez Penniman, Esq.	1822	Professors.		
1816	*Rev. Samuel Clark, A. M.	1817	1809	James Dean, A. M.,	
1816	Rev. D. Haskel, A. M., Prest.	1824		Math. and Nat. Phil.,	1814
1816	Hon. Ezra Meech,	1825	1809	John Pomeroy, M. D.,	
1817	Luther Loomis, Esq.	1818		Anatomy and Surgery,	1823
1818	Guy Catlin, Esq.		1811	*Rev. Jason Chamberlain, A. M.,	
1818	Rev. Leonard Worcester, A. M.	1821		Languages,	1814
1818	Rev. Calvin Yale, A. M.	1833	1811	*Hon. Royal Tyler, A. M.,	
1818	Samuel Hickok, Esq.	1822		Jurisprudence,	1814
1819	*Hon. William Baxter,	1827	1813	*Jairus Kennan, A. M.,	
1821	Hon. Wm. A. Griswold, A. M.			Chem. and Mineralogy,	1817
1821	*Hon. Seth Wetmore,	1833	1815	Rev. James Murdock, D. D.,	
1821	Rev. Joel Clapp, A. M.	1839		Languages,	1818
1822	Rev. Rufus W. Bailey, A. M.	1829	1815	Rev. Ebenezer Burgess, A. M.,	
1822	*Hon. D. Azro A. Buck, A. M.	1835		Math. and Nat. Phil.,	1817
1822	Daniel Kellogg, A. B.	1833	1819	Rev. Gamaliel S. Olds, A. M.,	
1822	E. D. Woodbridge, A. M.	1833		Math. and Nat. Phil.,	1821
1823	*Hon. Jonas Galusha,	1833	1819	Rev. Lucas Hubbell, A. M.,	
1823	Hon. Robert Pierpont, A. M.	1833		Languages,	1824
1823	Charles Adams, A. M.		1821	James Dean, A. M.,	
1823	Rev. Otto S. Hoyt, A. M.	1833		Math. and Nat. Phil.,	1824
1823	Hon. J. D. Farnsworth, M. D.		1821	Nathan R. Smith, M. D.,	
1823	Hon. Samuel Prentiss, L. L. D.			Anat. and Physiology,	1825
1823	Hon. Horace Everett, A. M.	1833	1821	*William Paddock, M. D.,	
1823	Hon. Isaac Fletcher, A. M.	1833		Bot. and Mat. Med.,	1825
1823	*Hon. Samuel C. Allen, A. M.	1833	1821	Arthur L. Porter, M. D.,	
1823	Hon. Salma Hale, A. M.	1833		Chem. and Pharmacy,	1825
1825	Rev. W. Preston, A. M., Prest.	1826	1823	*James K. Platt, M. D.,	
1825	Rev. John Wheeler, D. D.	1833		Surgery,	1825
1825	Rev. Worthington Smith, A. M.		1824	Rev. J. J. Robertson, D. D.,	
1826	Rev. J. Marsh, D. D., Prest.	1833		Languages,	1825
1827	Hon. Ira H. Allen,	1833	1825	G. W. Benedict, A. M.,	
1833	Hon. Timothy Follett, A. M.			Math. and Nat. Phil.,	1829
1833	Rev. Simeon Parmelee, A. M.		1825	*Rev. Wm. A. Porter, A. M.,	
1833	Hon. Alvan Foote, A. M.			Languages,	1827
1833	Rev. John Wheeler, D. D., Prest.		1825	Wm. Sweetser, M. D.,	
1835	Hon. Jacob Collamer, A. M.			Theo. and Prac. of Med.,	1832
1839	Exc. Charles Paine, A. M.		1825	*H. S. Waterhouse, M. D.,	
1839	Rev. William Mitchell, A. M.†			Surgery,	1827
Secretaries.			1825	John Bell, M. D.,	
1791	*Hon. Samuel Hitchcock, A. B.	1800		Anat. and Physiology,	1825
1800	Rev. Daniel C. Sanders, D. D.	1804	1825	Wm. Anderson, M. D.,	
1804	*John Fay, A. B.	1808		Anat. and Physiology,	1828
1808	Charles Adams, A. M.	1811	1827	Rev. Joseph Torrey, A. M.,	
1811	*Warren Loomis, A. M.	1817		Languages.	
			1829	G. W. Benedict, A. M.,	
				Nat. Phil. and Chem.	1839

† The Governors and Speakers of the House of Representatives are, ex officio, members of the board, but are omitted in this list.

† The Governors and Speakers of the House of Representatives are, *ex officio*, members of the board, but are omitted in this list.

PROFESSORS AND TUTORS.

ALUMNI AND HONORARY GRADUATES.

1829 G. R. Huntington, A.M.,
Mathematics, 1832
1829 *Benjamin Lincoln, M.D.,
Anat. and Surgery, 1834
1833 F. N. Benedict, A.M.,
Math. and Civ. Eng.
1833 Rev. James Marsh, D.D.,
Moral and Int. Phil.
1835 Edward E. Phelps, M.D.,
Anatomy and Surgery, 1837
1835 *Joseph Marsh, M.D.,
Theo. and Prac. of Med. 1841
1837 Henry Chaney, A.M.,
Natural Philosophy.
1839 G. W. Benedict, A.M.,
Nat. Hist. and Chem.
Tutors.

1804 Eliphalet B. Coleman,
1807 James Dean,
1817 Lucas Hubbell,
1818 *Benjamin F. Bailey,
1819 George B. Shaw,
1820 *Royal Washburn,
1825 Dana Lamb,
1827 Solomon Foot,
1828 George R. Huntington,
Graduates.

1804 Charles G. Lester
Charles Adams John N. Pomeroy
Wheeler Barns Addison Smith
*Jairus Kennan Alden B. Spooner
Justus P. Wheeler. 4 Joel Strong [12
1805 Stephen M. Wheelock.
*Oliver Hubbell HONORARY.
*Asahel Langworthy John Pomeroy, M.D.
*Warren Loomis. 3 *T. Powell, M. B.
1806 1810
*John H. Chaplin John Brownson
*Gardner Child David M. Camp
*Ezra C. Gross James D. Cobb
*Cassius F. Pomeroy Jacob Collamer
James L. Sawyer David Doane
James Strong. 6 Elijah Fletcher
HONORARY. Timothy Follett
James Dean, A.M. *John Kilburn
1807 Dauphin King
Amariah Chandler William Noble
Satterlee Clark Jabez Parkhurst
*Lewis Johnson. 3 Quartus Parmelee
HONORARY. Joseph P. Russell
*Josiah Smith, A.M. *Mayhew Safford
1808 *Fred'k A. Sawyer
*Ira Hill Davis Stone
Arch'd W. Hyde. 2 Norman Williams 17
HONORARY. HONORARY.
Jona. Nye, A. M. B. Chandler, M.D.
1809 *Samuel Clark, A.M.
William Atwater 1811
*John H. Bird *Luke B. Foster
Chauncey Brownell *Henry Hitchcock
Eli Brownson Levi Holbrook
Thomas Chittenden Oran Isham
Isaac R. Harrington Nathaniel Read

*Timothy Tyler
Luther Wait,
Jared Willson. 8
HONORARY.
A. Bronson, A.M.
*J. Chamberlain, A.M.
S. C. Crafts, A.M.
*John Denison, A.M.
Asa Green, A.M.
T. Hutchinson, A.M.
John Phelps, A.B.
*H. G. Spafford, A.M.
*Royal Tyler, A.M.
1812
Horace Allen
James C. Dutcher
Abial Fisher
Horace Griswold
*George Newell
Robert Steele
Samuel H. Tupper
Joseph Williamson. 8
HONORARY.
*F. Childs, A. M.
James Fisk, A.M.
Jona. Going, A.M.
Uriel C. Hatch, A.B.
*Asa Messer, LL.D.
Charles Phelps, A.B.
I. P. Richardson, A.M.
Joshua Y. Vail, A.M.
1813.
Ira Bellows
Grove L. Brownell
Israel Elliot
David French
E. C. Grosvenor
Sam'l G. Hopkins
Lucas Hubbell
Amos A. Parker
Phineas Randall
Lem'l H. Wicker. 10
HONORARY.
Joseph Elliot, A.B.
Henry Green, A.M.
N. Kendrick, A.M.
H. H. Ross, A.M.
1814.
Constantine Gilman
Isaac Holton
Isaac Moore
Erastus Root
Almon Warner 5
1815.
University suspended.
1816.
*Jehudi Ashmun
Samuel Clark. 2
HONORARY.
J. Le C. Cazier, A.B.
Elon Galusha, A.B.
1817.
Francis Bowman
Earle Smith
Cephas Washburn
Henry Woodward. 4
HONORARY.
Wm. A. Palmer, A.M.
1818.
*Benj. F. Bailey
Nehemiah Dodge
Luman Foote
Jacob Maeck. 4
HONORARY.
C. Southworth, A.M.
*H. P. Strong, A.M.
*A. Wheeler, A.B.
S. W. Whelpley, A.M.
1819.
*Samuel Buel
*Nahum Osgood
James A. Paddock
*Thomas K. Peck
Gamaliel B. Sawyer
George B. Shaw
Sam'l A. Worcester. 7
1820.
Seneca Austin
Heman M. Blodgett
George C. Cahoon
*Ebenezer Clapp
Samuel Flint
Silas C. Freeman
Jared Kenyon
Richard W. Smith
*Royal Washburn. 9
HONORARY.
E. H. Dorman, A.M.
*Asaph Morgan, A.M.
Aaron Palmer, A.M.
1821.
*Ephraim Adams
William C. Hickok
Henry Leavenworth
*George Peaselee
Edmund Weston. 5
HONORARY.
A. Partridge, A.M.
1822.
Pliny M. Corbin
Thomas Nye
Moses Rolph. 3
HONORARY.
Spencer Clack, A.B.
1823.
Frederick H. Allen
Warren Hoxsie
Edwin Hutchinson
Orson Kellogg
*Royal M. Ransom
Zadock Thompson
James Towner
*E. B. Williston. 8
M. D.
Moses Chandler
Elijah Cooper
Elisha Moore
John Morley.

UNIVERSITY OF VERMONT.

ALUMNI AND HONORARY GRADUATES.

HONORARY. Wm. F. Hall, A.M. C.P. Van Ness, LL.D. <i>Charles Walker, A.M.</i> 1824. John A. Ferris Lynde C. Ferris <i>Stephen L. Herrick</i> Geo. W. Houghton Orramel Hutchinson George H. Parker *John Storrs William W. Wells Boyd H. Wilson. 9 M. D. Horace P. Blair Christ'r Carpenter David E. Deming Julius Y. Dewey Lewis Dorwin John Gallup Edward Kane Elias Smith Orange Smith Alvah Sprague David Ward John S. Webster Tolman Wheeler.	Burrill S. Miner *Ezra Scovel Daniel L. Shaw Joel Stone, Lazarus Tousey Miner Y. Turrill. HONORARY. W. Atchinson, M.D. Isaac Fletcher, A.M. D. L. Morrill, LL.D. Elijah Paine, LL.D. <i>M. Townsend, A.M.</i> Geo. E. Wales, A.M. 1826. <i>Asa Brainerd</i> Alexander Catlin *Martin Chittenden Erastus D. Culver Leonard M. Fitch <i>Daniel D. Francis</i> Enoch Hale Geo. R. Huntington <i>Daniel Parker</i> Rotus Parmelee James F. Robinson John L. Russell Guy B. Shepard William Wilson. 14 M. D. Willis S. Alger Anson Brackett P. Chamberlain John C. Colby John P. Hamilton Alexander H. Jones Samuel H. Lyon Ezekiel P. Minkler Lewis Samburn Rensselaer Soule HONORARY. <i>John Bristed, A.M.</i> A. H. Everett, LL.D. H. Powell, M.D. <i>Alvah Sabin, A.M.</i> *John Weston, M.D. 1827. <i>George Allen</i> Nicholas Baylies *Charles F. Deming Francis S. Eastman <i>John Q. A. Edgell</i> Anson E. Hathon <i>Henry P. Hickok</i> Rodney D. Hill <i>Byram Lawrence</i> Percival Morse C. G. Newton Chas. C. Severance A. A. Wainwright. 13 M. D. Bela Bowman Solon Campbell John B. Dousman J. K. Hardenbrook	Orange B. Heaton Frederick Johnson Daniel H. Onion William P. Porter Benjamin F. Post Thomas R. Powell Lawrence Proudfoot Henry H. Reynolds John W. Robison Benaiah Sanborn. HONORARY. Elijah Baker, M.D. <i>Sylvester Nash, A.M.</i> Robert Nelson, M.D. 1828. Seymour L. Allen <i>Archibald Fleming</i> Wm. F. Griswold <i>Daniel Wild.</i> 4 M. D. Daniel Bates Anselm Bray John Brown Ira Day James Emery Foster Hooper Tyler Mason Collins R. Pierce David R. Putnam Joseph H. Ripley. HONORARY. <i>M. Bingham, A.M.</i> D. Goodyear, M.D. *John Lynde, A.M. <i>L. McDonald, A.M.</i> <i>Silas McKeen, A.M.</i> <i>James Reid, A.M.</i> 1829. Asa O. Aldis C. D. Bradford John C. Jones Jonathan Lamb Seth C. Sherman Cornelius Van Ness O. W. Withington. 7 M. D. Charles C. Arms Horace H. Bassford Cullen Bullard Stephen C. Cady Orrin S. Campbell Jas. H. Farnsworth William Green Andrew L. Hayes John Meigs Daniel L. Porter Gary Whitney John Work Elisha R. Wright. HONORARY. Roswell Bates, M.D. Jona. Berry, M.D. <i>S. Bicknell, A.M.</i> *Hope L. Dana, M.D.	Jona. P. Miller, A.M. 1830. <i>James Dougherty</i> Curtis A. Emerson Perry Haskell <i>Oliver S. Powell.</i> 4 M. D. Ethan Allen Jacob Clark Amos Emerson Benj. Fairchild Levi Goodenough Isaac Hall Edwin W. Hopkins Oliver T. Houghton William Towner. HONORARY. *Samuel S. Wood- bridge, A. M. 1831. <i>Zenas Bliss</i> Henry Chaney <i>John Fairchild</i> <i>Samuel Lee</i> <i>Elon O. Martin</i> <i>Benjamin B. Newton</i> *George Powell Edward Seymour <i>Chauncey Taylor</i> 9 M. D. S. P. Barnum Baxter Bowman Calvin S. Millington Orrin Smith Charles K. Swift John D. Wood. 1832. John Hutton <i>Harmon Loomis</i> Tullius C. Tupper <i>Robert Turnbull</i> Willard Wadhams 5 M. D. Jean B. Allard Albert C. Butler Silvester Cartier Cyrille H. O. Côte Samuel Hall *Reuben Y. Maeck Sylvester G. Matson Moses Perley Samuel A. Robinson *Seraphin Viger HONORARY. <i>John H. Hopkins, D.D.</i> Jos. Painchaud, M.D. Wm. Robertson, M.D. 1833. Lorenzo Coburn *Orville Hosford George K. Platt. 3 M. D. Darius A. Beckwith S. Newell Fisk
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UNIVERSITY OF VERMONT.

ALUMNI AND HONORARY GRADUATES.

Pliny P. Greene	Orville G. Wheeler	Geo. R. Robertson	Sewall S. Cutting
Pliny Sherman.	Robert A. Wilson 18	Ezekiel H. Sayles	William A. Norton
HONORARY.	HONORARY.	Wm. G. T. Shedd	Hiram Powers
J. T. Ducatel, M.D.	Step'n Royce, L.L.D.	Marston C. Smith	John H. Walden
1834.	G. W. Strong, L.L.D.	Charles Temple	1841.
Charles D. L. Brush	Thos. McAuley, D.D.	Edward Van Sicklen	William T. Barron
Justin B. Taylor. 2	A. M.	*Charles Wells 22	John N. Baxter
HONORARY.	Herman R. Beardsley	HONORARY.	David Black
David Russell, D.D.	Joel Blackmer	Henry Clay, L.L.D.	Henry S. Brewster
Roswell Shurtleff, D.D.	Julius Converse	Carlton Chase, D. D.	Daniel B. Buckley
Alvan Stewart, A.M.	Joseph B. Eastman	A. M.	Samuel C. L. Curtis
1835.	Samuel S. Fitch	Joseph D. Allen	Christop'r M. Davey
Edward H. Billings	Roswell Marsh	Edward H. Brown	Jonathan W. Earle
Samuel B. Bostwick	1838.	Edwin F. Johnson	Edward Everett
Benjamin Gould	John S. Adams	St. J. B. L. Skinner	Elliot T. Farr
Henry E. Seymour. 4	Homer H. Benson	1840.	Frederick T. Hall
HONORARY.	George Blackman	John H. Bates	William L. Knowles
B. J. Heineberg, M.D.	Edward A. Cahoon	Dudley C. Denison	George L. Lyman
Benj. Mooers, M. D.	Hugh Cameron	Joseph C. Fowler	Eber Maltby
A. M.	Chas. S. Carpenter	Henry Hale	Warren H. Marsh
Farrand N. Benedict	Rufus Case	William Higby	Edgar Meech
Carlos Coolidge	John F. Deane	Daniel C. Houghton	Charles C. Parker
Hiland Hall	Wm. L. Dickinson	Dan'l S. McMasters	William W. Peck
Henry F. Janes	Zechar'h N. Garbutt	Ira Morey	Moses S. Prichard
*Joseph Marsh	*Andrew Harris	Benjamin F. Mower	Douglas Smith
Edward E. Phelps	Henry B. Janes	Henry J. Raymond	Torrey E. Wales
Isaac F. Redfield	John B. Johnson	Thomas Rice	F. E. Woodbridge 22
Benj. H. Smalley	Alexander Mann	James R. Spalding	HONORARY.
Phineas Spaulding	Calvin Pease	John S. D. Taylor	Benj. Labaree, D. D.
Andrew Tracy	Charles W. Potwin	Benj. J. Tenney 14	E. W. Gilbert, D. D.
Philip C. Tucker	Albin K. Putnam	HONORARY.	A. M.
William Upham.	Charles S. Putnam	Elijah Hedding, D. D.	Wm. B. Benedict
1836.	George W. Reed	A. M.	Calvin Granger
Wm. H. A. Bissell	Andrew Robertson	Cornelius M. Brosnan	Wm. H. C. Hosmer
Franklin Butler	John G. Smith		
Oscar F. Dana	Simeon H. Stevens	Whole number of Alumni,	314
Edwin Flint	John W. Weed	" " of Medical graduates	107
Edward W. Marsh	George H. Wood 24	" " of Honorary degrees	140
Charles W. Rich	HONORARY.		
Elb. Walbridge. 7	Silas Wright, L.L.D.	Total	561
HONORARY.	A. M.		
*Samuel Gile, D.D.	Lucius F. Doolittle		
A. M.	Lucius B. Peck		
William F. Currey	Robert Pierpont		
Paul Dillingham	Samuel B. Prentiss		
George W. Ranslow	John Smith		
David Read.	Jona. D. Woodward		
1837.	Ammi B. Young		
George W. Angell	1839.		
Charles L. Austin	Harvey Adams		
Erasmus I. Carpenter	Joseph W. Allen		
Horace Everett	Dudley C. Blodgett		
Arthur M. Foster	Moses P. Case		
James W. Hickok	Edmund T. Dana		
Almon Lawrence	Josiah A. Fletcher		
Joseph H. Myers	James Forsyth		
Jason Niles	Isaac N. Gregory		
Aaron G. Pease	William T. Herrick		
George H. Peck	John H. Hopkins		
Joseph Scott	George F. Houghton		
Benjamin L. Shaw	Charles Jarvis		
Andrew J. Smith	William F. Macrae		
Alexis C. Stevens	Charles P. Marsh		
Ebenezer M. Toof	William P. Pierson		

SECTION IV.

Middlebury College.

A county grammar school had been established at Middlebury in 1797, and more than \$4000 was shortly after raised by subscription, mostly in Middlebury, to defray the expense of erecting a suitable building for its accommodation. In 1798, while the building was in progress of erection, Dr. Dwight happened to be at Middlebury, and, as little had then been done towards carrying into effect the act establishing a University at Burlington, he encouraged the people of Middlebury to prosecute the plan of establishing a college at that place. They accordingly applied to the legislature for a college charter, with the hope, on the part of some, that they might also obtain the lands which had already been granted to the University. They succeeded in ob-

MIDDLEBURY COLLEGE.

SUPPORT, BUILDINGS, SOCIETIES.

taining an act of incorporation dated November 1, 1800, with the title of the "President and Fellows of Middlebury College," but all endowment by the state was refused. The Rev. Jeremiah Atwater, who had been a tutor in Yale College, and who was at that time principal of the Addison County Grammar School, was constituted President of the College by the act of incorporation, and under his superintendence, the institution was immediately organized, and seven students admitted. The first commencement was held in 1802, when only one student received the degree of A. B.; but the students increased so rapidly that in 1808 the graduating class numbered 23. In 1809, President Atwater gave in his resignation, and in Feb. 1810, Henry Davis, professor of languages in Union College, was appointed President. He resigned in 1817, to accept the presidency of Hamilton College, and was succeeded by the Rev. Joshua Bates, who resigned in 1839, and was succeeded, in 1840, by the Rev. Benjamin Labaree.

Support.—Having received no endowment from the state, this institution has, from the beginning, depended entirely upon the tuition and the liberality of individuals for support, and the zeal with which it has been sustained is highly creditable to the people of Middlebury and vicinity. Among the long list of its benefactors the names of Samuel Miller, Arad Hunt, Gamaliel Painter, Joseph Burr, and Isaac Warren deserve particular notice. The former of these gentlemen made a donation to the college of \$1000, at an early period of its existence. In 1813, Gen. Arad Hunt, of Hinsdale, N. H., deeded to the college, lands in Albany, Vt., amounting to more than 5000 acres, the rents of which make an important part of the present income of the institution. Gamaliel Painter, Esq., who died at Middlebury, May 21, 1819, made the college the residuary legatee of his estate, and from that about \$13,000 was realized. Joseph Burr, Esq., of Manchester, who died April 14, 1828, left a legacy to the college of \$12,000, as the foundation of a professorship. And in 1834, Dea. Isaac Warren, of Charlestown, Mass., left the college a legacy of \$3000, besides subscribing \$1000 for the support of an additional professor. In addition to the subscription for the erection of the first building in 1798, in 1810 several thousand dollars were raised for building what is called the north college. In 1816 a subscription of more than \$50,000 was filled out for the benefit of the college, but on account of some irregularity in the

proceedings it was declared invalid by the courts, and only about \$14,000 of it was realized. In 1835, another subscription for the benefit of the college was completed, from which \$25,000 has been realized, of which \$15,000 was appropriated for the erection of a new college edifice.

Buildings.—The college buildings consist, at present, of three spacious edifices. The oldest, which is of wood, and at present known as the east college, was erected in 1798, as already mentioned. It is now divided into convenient rooms for students. The second building, called the north college, was completed in 1815. It is built in a substantial manner of light colored limestone, is 106 feet long, 40 wide, and 4 stories high, containing 48 rooms for students. The third building, called the chapel, was completed in 1836, at a cost of \$15,000. It is built of limestone, is 75 feet in length by 50 in breadth, and presents a handsome front to the east. Besides a place for public worship, it contains three lecture rooms, three rooms for libraries, six recitation rooms, and three private rooms for officers.

Library.—A college library was commenced with the college in 1800, and about \$1000 was then subscribed by a few spirited individuals for the purchase of books, and the increase since has been principally by donation of books. It now amounts to about 3000 volumes. The libraries belonging to the societies in college number, in addition, about 2500 volumes.

Apparatus.—The philosophical apparatus is sufficiently extensive for illustrating a full course of lectures, and contains many excellent instruments. The principal part of it was imported from London in 1817. The chemical apparatus, which is sufficient for ordinary purposes, was procured in London in 1828. The cabinet of minerals and other natural objects forms a prominent attraction to visitors. It presents, in a very neat and systematic arrangement, 1550 specimens in mineralogy and geology, and 2500 in zoology and botany. Of the latter a large part are recent additions.

Societies.—Soon after the establishment of the college, the *Philomathesian* society was formed for the general improvement of the students. It was incorporated in 1822, and has a library of about 2000 volumes. Its meetings are held weekly during term time, at which questions are discussed and compositions read by members previously appointed. It has an annual exhibition, usually on the day pre-

MIDDLEBURY COLLEGE.

COURSE OF STUDIES.

eeding commencement. In 1804, the *Philadelphian* society was formed. It consists of professors of religion only, and its object is the cultivation of the moral faculties, and the religious improvement of its members. It has a library of about 500 volumes. In 1813, two other societies were formed, one for the purpose of aiding indigent students by furnishing them with text books, and called the *Beneficent* society; and the other, called the *Charitable* society, for the purpose of assisting indigent, but pious and talented young men, in obtaining a liberal education and in qualifying for the work of the gospel ministry, either by giving or loaning them money. This last society is now merged in the north-western branch of the American Education Society. In 1824 was held the first meeting of the *Associated Alumni* of the college. They annually appoint an orator and poet to address them at commencement, and have already published several valuable orations.

Admission.—For admission to the Freshman Class, candidates are examined in Andrews and Stoddard's Latin Grammar, Cicero's Select Orations, Virgil, Sallust, Goodrich's or Sophocles' Greek Grammar, Jacob's Greek Reader, or an equivalent, Latin Prosody, Writing Latin, Arithmetic and Geography. To be admitted to an advanced standing, besides the requisites for admission to the Freshman Class, the candidate must sustain a satisfactory examination in all the studies pursued by the class he would enter, up to the time of his joining it.

STUDIES AND TEXT BOOKS.

Freshman Class.

Fall Term. Xenophon's *Cyropædia*; Folsom's *Livy*; Davie's *Bourdon's Algebra*, half completed; Porter's *Analysis*.
Spring Term. *Cyropædia*, *Livy*, and *Algebra* finished; Jamieson's *Rhetoric*.
Summer Term. Homer's *Iliad*, Horace's *Odes*; Playfair's *Euclid*; Jamieson's *Rhetoric* finished.

Sophomore Class.

Fall Term. *Iliad* continued; Horace and *Euclid* finished; Whately's *Logic*.
Spring Term. Xenophon's *Memorabilia*; Cicero de *Officiis*; Day's *Mathematics*. *Logarithms*, *Plane Trigonometry*, *Mensuration of Superfices and Solids*, *Isoperimetry*; *Logic* finished. *Summer Term.* *Memorabilia* continued; Tacitus' *History*; Day's *Mathematics*, *Mensuration of Heights and Distances*, *Navigation and Surveying*; *Spherical Trigonometry*; Whately's *Rhetoric*.

Junior Class.

Fall Term. Demosthenes and Eschines de corona; Tacitus finished; Bridge's *Conic Sections*; Olmsted's *Philosophy*; Gray's *Chemistry*; *Rhetoric* finished.
Spring Term. Greek Tragedies; Electra of Sophocles, and Alcestis of Euripides; Cicero de *Oratore*; Olmsted's *Philosophy* finished; Gray's *Chemistry* finished.
Summer Term. Greek Tragedies finished; De *Oratore* finished; Herschel's *Astronomy*; Gray's *Botany*; Eaton and Wright's or Buck's *Botany* for analysis.

Senior Class.

Fall Term. Stewart's *Elements of the Philosophy of the Mind*, with references to the works of Locke, Reid, Brown and Upham; Wayland's *Moral Philosophy*; Paley's *Evidences of Christianity*; *Zoology*.
Spring Term. *Intellectual Philosophy* continued; Vattel's *Law of Nations*; *Evidences of Christianity* continued; Dana's *Mineralogy*; Hitchcock's *Geology*.
Summer Term. Wayland's *Political Economy*; Butler's *Analogy*; *Geology* finished; Paley's *Natural Theology*.

Winter Term.

The above constitutes the regular college course. Besides this there is a *Winter Term*, extending from the 1st Wednesday in December to the 2d Wednesday in February, during which the members of all the classes, who are not excused for the purpose of teaching school, are required to be present, and to pursue such supplementary course of studies as the faculty shall prescribe.

Lectures on Natural Philosophy, Chemistry, and Introductory to Botany and Zoology are delivered before the Junior Class; and on *Zoology, Mineralogy, Geology, Natural Theology, Astronomy, Meteorology, Civil Engineering*, and on *Eloquence and Style*, before the Senior Class.

Declamations, Compositions and Translations are required frequently through the whole course.

Examinations are held at the close of each term of the regular college course, and that at the close of each year extends to all the previous studies.

Commencement on the third Wednesday in August annually.

Vacations. From Commencement four weeks; from the last Wednesday in November one week; from the 2d Wednesday in February two weeks; and from the 3d Wednesday in May two weeks.

Every student, on entering college, is required to give a bond to the treasurer, with sufficient sureties, to secure the reg-

MIDDLEBURY COLLEGE.

CORPORATION AND PROFESSORS.

ular payment of his college bills, and the bills are made out at the close of each quarter. Those who enter to an advanced standing are required to pay one half of the back tuition except when they come from another college.

CATALOGUE

OF ALUMNI AND HONORARY GRADUATES.

Elected.	Presidents.	Exit.
1800	Rev. Jeremiah Atwater, D. D.	1809
1810	Rev. Henry Davis, D. D.	1817
1818	Rev. Joshua Bates, D. D.	1839
1840	Rev. Benjamin Labaree, D. D.	

Corporation.

1800	Hon. Nath'l Chipman, L. L. D.	
1800	Rev. Heman Ball, D. D.	1821
1800	Hon. Elijah Paine	1809
1800	Hon. Gamaliel Painter	1819
1800	Exc. Israel Smith, A. M.	1810
1800	Hon. S. R. Bradley, L. L. D.	1830
1800	Seth Storrs, A. M.	1837
1800	Hon. Stephen Jacob, A. M.	1810
1800	Hon. Daniel Chipman, A. M.	
1800	Hon. Lot Hall	1809
1800	Rev. Aaron Leland, A. M.	1833
1800	Rev. Gershom C. Lyman, D. D.	1805
1800	Samuel Miller, A. M.	1810
1800	Hon. J. P. Buckingham, A. M.	1823
1800	Hon. Darius Matthews	1819
1801	Rev. William Jackson, A. M.	
1802	Rev. Job Swift, D. D.	1804
1805	Rev. Martin Tullar, A. M.	1813
1806	Rev. Samuel Shepard, A. M.	1813
1806	Rev. Thomas A. Merrill, D. D.	
1806	Rev. Sylvester Sage, A. M.	1840
1810	Rev. Bancroft Fowler, A. M.	1825
1810	David Edmond, A. M.	1824
1810	Hon. Horatio Seymour, A. M.	
1811	Rev. Asa Burton, D. D.	1823
1811	Hon. Chauncey Langdon	1830
1811	Hon. Asa Aldis, A. M.	1815
1815	Rev. John Fitch, A. M.	1817
1817	Exc. Richard Skinner, A. M.	1833
1817	Rev. Henry P. Strong, A. M.	1823
1817	Hon. William Hall, A. M.	1830
1819	Peter Starr, A. M.	
1819	Ira Stewart	
1819	Hon. Joel Doolittle, A. M.	1841
1819	Hon. Z. R. Shepherd, A. M.	1841
1819	Rev. Abraham Bronson, A. M.	1832
1819	Rev. Chester Wright, A. M.	1840
1821	Rev. Walter Chapin, A. M.	1826
1821	Rev. Absalom Peters, D. D.	1841
1821	Hon. Jonathan Hunt, A. M.	1832
1821	Hon. Abner Forbes	1829
1823	Rev. Nath'l S. Prime, A. M.	1826
1824	Rev. N. S. S. Beman, D. D.	
1825	Rev. Josiah Hopkins, A. M.	1840
1825	Hon. C. K. Williams, L. L. D.	
1825	Hon. Rollin C. Mallery, A. M.	1831
1827	Hon. Samuel Swift, A. M.	
1830	Rev. Wm. B. Sprague, D. D.	1839
1830	Rev. Jedediah Bushnell, A. M.	

1830	Hon. Benjamin Swift, A. M.	1839
1830	Rev. Dan'l O. Morton, A. M.	
1831	Rev. Willard Child, A. M.	
1833	Rev. Lyman Coleman, A. M.	1840
1834	Rev. Edward W. Hooker, A. M.	
1834	Hon. Phineas White, A. M.	
1834	Rev. Hadley Proctor, A. M.	
1837	Rev. Charles Walker, A. M.	
1837	William Page, A. M.	
1838	Hon. Isaac F. Redfield, A. M.	
1839	Rev. Joshua Bates, D. D.	
1839	Rev. Harvey F. Leavitt, A. M.	
1840	Rev. Joseph D. Wickham, A. M.	
1840	Rev. Elijah W. Plumb, A. M.	
1840	Rev. Amos B. Lambert, A. M.	
1840	Rev. Silas H. Hodges, A. M.	
1840	Hon. Zimri Howe, A. M.	
1841	Rev. Otto S. Hoyt, A. M.	
1841	Rev. Lucius L. Tilden, A. M.	
1841	Rev. Lucius M. Purdy, A. B.	

Treasurers.

1800	Hon. Darius Matthews	1803
1803	Samuel Miller, A. M.	1806
1806	Hon. Samuel Swift, A. M.	1810
1810	John Simmons, A. M.	1829
1829	William G. Hooker	1830
1830	Rev. Wm. C. Fowler, A. M.	1837
1837	Hon. Samuel Swift, A. M.	1839
1839	Peter Starr, A. M.	

Secretaries

1800	Seth Storrs, A. M.	1807
1807	Peter Starr, A. M.	1815
1815	Hon. Samuel Swift, A. M.	1826
1826	Harvey Bell, A. M.	

Professors.

Law.

1806	Hon. Daniel Chipman, A. M.	1816
1816	Hon. Nath'l Chipman, L. L. D.	

Mathematics and Natural Philosophy.

1806	Frederick Hall, L. L. D.	1824
1825	Edward Turner, A. M.	1838
1838	Solomon Stoddard, A. M.	1838
1838	Alexander C. Twining, A. M.	

Greek and Latin Languages.

1811	Oliver Hurlburt, A. M.	1812
1812	Rev. John Hough, A. M.	1817
1817	Solomon M. Allen, A. M.	1817
1818	Robert B. Patton, A. M.	1825
1825	Rev. John Hough, A. M.	1838
1838	Solomon Stoddard, A. M.	

Theology.

1817	Rev. John Hough, A. M.	1825
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Chemistry* and Natural History.

1828	Rev. Wm. C. Fowler, A. M.	1838
1838	Charles B. Adams, A. M.	

* The professorship of Chemistry was established in 1816, and the Rev. Gamaliel S. Olds, of Greenfield, Mass., appointed to the office; but on account of some misunderstanding between him and the corporation, he never joined the institution.

MIDDLEBURY COLLEGE.

TUTORS AND GRADUATES.

<i>Rhetoric and English Literature.</i>				<i>HONORARY.</i>	
1838	Rev. John Hough, A. M.	1839	*Thomas E. Hale	*Eli P. Ashmun, A. M.	
1840	Rev. Albert Smith, A. M.		<i>Daniel G. Hopkins</i>	<i>Truman Baldwin, A. M.</i>	
<i>Tutors.</i>			*Thomas D. Huggins	<i>Allen Greeley, A. M.</i>	
1800	Joel Doolittle, A. M.	1801	<i>Ira Manley</i>	*Jedediah P. Buckingham, A. M.	
1801	Samuel Swift, A. M.	1803	*David M. Whorter	<i>John Hough, A. M.</i>	
1803	Experience Porter, A. M.	1804	*Matthew Phelps	*Dan Kent, A. M.	
1804	Thomas A. Merrill, D. D.	1805	*Wm. D. Smith	John Williams, A. M.	
1804	Walter Chapin, A. M.	1806	Juba Storrs	Marcus Doolittle	
1805	Frederick Hall, A. M.		<i>HONORARY.</i>	1808.	
1806	Allen Greeley, A. M.	1805	*Asa Burton, D. D.	Asa Aikens	
1808	Oliver Hurlburt, A. M.	1806	<i>Elihu Smith, A. M.</i>	Samuel Champlin	
1809	Richard Hall, A. M.	1808	*Lemuel Haynes, A. M.	*Perez Chapin.	
1810	Ira Bascom, A. M.	1811	<i>L. Worcester, A. M.</i>	Fitch Chipman	
1811	William Goodell, A. M.	1810	<i>William L. Strong</i>	G. D. Chipman	
1811	Horace Conant, A. M.	1811	*Curtis Judson	*Joseph W. Clary	
1813	Joel H. Linsley, D. D.	1813	Uriah Wilcox	John Dickson	
1813	Samuel S. Davis, A. M.	1813	1805.	Udney H. Everest	
1814	Solomon M. Allen, A. M.	1815	<i>Amos Bingham</i>	<i>Richard Hall</i>	
1815	Eleazer Barrows, A. M.	1814	<i>Luther P. Blodgett</i>	<i>J. P. K. Henshaw</i>	
1815	Otto S. Hoyt, A. M.	1817	<i>William H. Cooley</i>	*Solomon S. Miller	
1816	Reuel Keith, D. D.	1815	<i>Joel Davis</i>	Noadiah Moore	
1817	Holden Rhodes, A. M.	1816	Jesse Gove	Josiah Peet	
1817	Daniel Hemenway, A. M.	1817	*Daniel Gray	R. Robinson	
1817	Robert B. Patton, A. M.	1817	Daniel Hall	C. L. Rockwood	
1818	Franklin Sherrill, A. M.	1818	*Timothy Harris	*Hippocrates Rowe	
1818	Henry Howe, A. M.	1818	<i>John Lawton</i>	James N. Seaman	
1820	Jona. C. Southmayd, A. M.	1820	*Joseph D. Learned	<i>Luther Sheldon</i>	
1820	Justus W. French, A. M.	1820	*Rollin C. Mallary	Joseph Sill	
1821	Heman Rood, A. M.	1823	*Calvin Noble	Ebenezer T. Sperry	
1822	Josiah F. Goodhue, A. M.	1821	Justus Post	William Swetland	
1823	Edward Turner, A. M.	1822	*Julius A. Preston	Joshua Y. Vail	
1824	Luther G. Bingham, A. M.	1823	Salem Town	*Edward Warren 23	
1825	John Stevens, A. M.	1825	*Chester Wright 16	<i>HONORARY.</i>	
1827	Edwin Hall, A. M.	1825	<i>HONORARY.</i>	Edw'd Hooker, A. M.	
1828	Henry Smith, A. M.	1827	<i>William Boies, A. M.</i>	Dan'l Chipman, A. M.	
1830	Truman M. Post, A. M.	1828	<i>Bancroft Fowler, A. M.</i>	*Pliny Moore, A. M.	
1832	William H. Parker, A. M.	1830	<i>Thos. A. Merrill, A. M.</i>	*T. Reeve, L. L. D.	
1834	Harvey Curtis, A. M.	1832	1806.	1809.	
1835	Samuel S. Howe, A. M.	1834	*William Andrews	Harvey Bell	
1836	Leonard Rawson, A. M.	1835	*Caleb Burge	Bela Edgerton	
1836	James Meacham, A. M.	1836	*Asahel Clark	Micajah Fairfield	
1836	Harvey D. Kitchell, A. M.	1837	Solomon G. Conklin	Benjamin Foster	
1837	James D. Butler, A. B.	1838	<i>Chauncey Cook</i>	M. N. Kinney	
1838	James M. Flagg, A. M.	1837	Eli Eddy	Thomas Leland	
1838	J. A. B. Stone, A. M.	1838	<i>John Frost</i>	<i>Benj. B. Stockton</i>	
1839	R. D. C. Robbins, A. M.	1838	<i>Daniel Hascall</i>	<i>J. D. Winchester 8</i>	
1839	William Franklin Bascom	1839	*Daniel Hunter	<i>HONORARY.</i>	
1840	David F. Stoddard	1839	*Oliver Hurlburt	Alex. M. Leod, D. D.	
1840	Milo Judson Hickok	1839	*Oliver Leavitt	1810.	
<i>Graduates</i>		1840	*Luther Leland	Horace Conant	
1802.		1840	Stephen Martindale	William Goodell	
*Aaron Petty 1			*Calvin Sheldon 14	*Fifield Holt	
<i>HONORARY.</i>			<i>HONORARY.</i>	Justus S. Hough	
Joel Doolittle, A. M.			Frederick Hall, A. M.	Zimri Howe	
1803.			*William Hall, A. M.	E. H. Newton	
*Walter Chapin			<i>Exp'nce Porter, A. M.</i>	John S. Pettibone	
Henry Chipman			1807.	*Stephen C. Pitkin	
Edw. S. Stewart 3			*Ira Bascom	*Daniel Smith 9	
<i>HONORARY.</i>			*D. A. A. Buck	<i>HONORARY.</i>	
Archb'd Bennet, A. M.			<i>Nathan S. S. Beman</i>	Austin Hazen, A. M.	
*C. Langdon, A. M.			*Mills Purdy	Const'ne Storrs, A. M.	
			Stephen Royce		
			William Slade		
			Oliver C. Stewart 7		

MIDDLEBURY COLLEGE.

ALUMNI AND HONORARY GRADUATES.

1811.	F. R. Cossit	1815.	Uriel Fuller
Nathan G. Babbitt	<i>Nathan Douglass</i>	*Edward Aiken	Samuel Hitchcock
<i>Eleazer Barrows</i>	Junius H. Hatch	<i>Salmon Bennet</i>	Henry Howe
Titus Brown	*Thomas Hopkins	<i>Dana Claves</i>	Enos B. M. Hughes
Carlos Coolidge	<i>Otto S. Hoyt</i>	*Silas Chipman	Thomas Huntington
<i>Enock Corser</i>	<i>Luther Humphrey</i>	*Edward Cone	<i>Chauncey G. Lee</i>
Charles Davis	Hall J. Kelley	*Oliver D. Cooke	<i>Jacob N. Loomis</i>
<i>Jeremiah Flint</i>	George W. Kirtland	Henry Crawford	Charles Nicoll
<i>Calvin Hitchcock</i>	* <i>Sylvester Larned</i>	*Lucius C. Foot	John Russell
<i>Joseph Labaree</i>	Abiel P. Mead	Alfred Gillet	<i>F. Gillet Smith</i>
James Lansing	*Selah H. Merrill	G. H. Green	* <i>J. C. Southmayd</i>
A. B. Lawrence	Samuel Nelson	David A. Hall	Charles Watrous
<i>Joel H. Linsley</i>	Benjamin Nixon	<i>Daniel Hemenway</i>	* <i>Lyman Whitney</i> 18
Thos. P. Matthews	*Henry G. Palmer	<i>Ira Ingraham</i>	HONORARY.
<i>Benton Pixley</i>	<i>Otis Rockwood</i>	<i>Leonard E. Lathrop</i>	<i>Jeremiah Day, D. D.</i>
John Sargeant	<i>John Ross</i>	A. Van Tuyl Leavitt	<i>Rich'd Skinner, A. M.</i>
Calvin Solace	<i>D. D. Rosseter</i>	* <i>Alonzo Phillips</i>	Enoch D. Wood-
<i>Miles P. Squier</i>	<i>Reuben Smith</i>	Holden Rhodes	bridge, A. M.
Heman Swift	* <i>Noble D. Strong</i>	<i>Louis Robbins</i>	* <i>Selah Gridley, A. M.</i>
Jonathan Taylor 19	*Humphrey Webster	Charles Smith	<i>Roger Searle, A. M.</i>
HONORARY.	*Lucas Whitcomb	<i>C. Southworth</i>	<i>Abr'm Bronson, A. M.</i>
*C. Chauncey, L. L. D.	Joseph Whitley	<i>Lucius A. Spafford</i>	<i>Sylvester Haynes, A. M.</i>
<i>Alex. Proudfit, D. D.</i>	*Charles Wilcox	Jesse Strickland	<i>Jonathan Hovey, A. M.</i>
*David Edmond, A. M.	John Willard	<i>Ebenezer Washburn</i>	Erwin Hopkins, A. M.
H. Seymour, A. M.	Hubbard Willson 29	Daniel E. Watrous	1818.
* <i>Henry Bigelow, A. M.</i>	HONORARY.	<i>Miron Winslow</i>	<i>Charles E. Avery</i>
<i>Asahel Stone, A. M.</i>	<i>Josiah Hopkins, A. M.</i>	*Samuel Wolcott	Harvey Ball
B. Parks, A. M.	<i>Sam'l Leonard, A. M.</i>	Silas Wright	C. P. Beman
1812.	<i>S. Parmelee, A. M.</i>	David Gould	Samuel Center
<i>Jonathan Adams</i>	1814.	Isaac Parker	E. W. Chester
*Joseph R. Andrus	<i>Samuel C. Aiken</i>	* <i>Silas Safford</i> 30	<i>John Clancey</i>
<i>Seth S. Arnold</i>	David Bailey	HONORARY.	<i>Philetus Clark</i>
Gustavus A. Bird	<i>R. Chamberlain</i>	* <i>Jonas Coe, D. D.</i>	<i>Jonathan Clement</i>
Stephen Bliss	<i>Benjamin Chase</i>	<i>James Laurie, D. D.</i>	Dexter Hitchcock
Isaac N. Cushman	<i>Ira Chase</i>	S. H. Tupper, A. M.	* <i>Samuel Mosely</i>
<i>Samuel S. Davis</i>	<i>Caleb Clark</i>	1816.	<i>William Page</i>
Martin C. Deming	<i>Nehemiah Cutter</i>	<i>Benson C. Baldwin</i>	<i>William Patton</i>
*Martin Fitch	<i>Orson Douglass</i>	<i>Harace Belknap</i>	<i>Marcus A. Perry</i>
<i>Henry Fuller</i>	*Benjamin Durkee	<i>Hiram Bingham</i>	Henry Sheldon
<i>Allen Graves</i>	<i>Noah Emerson</i>	<i>Lucas Bowen</i>	<i>Marcus Smith</i>
Friend M. Hall	* <i>Pliny Fisk</i>	Ambrose L. Brown	<i>John B. Steele</i>
George S. Henshaw	<i>Calvin Foote</i>	<i>Alonzo Church</i>	Dan Stone
Oren Hyde	<i>Benj. Gildersleeve</i>	*Charles G. Haines	Samuel Tuttle 18
<i>Hiram S. Johnson</i>	* <i>Thomas C. Henry</i>	<i>Edward Hollister</i>	HONORARY.
<i>Chester Long</i>	<i>Edward W. Hooker</i>	Edwin James	* <i>Chs. Y. Chase, A. M.</i>
<i>Daniel O. Morton</i>	<i>Reuel Keith</i>	<i>Asa Messer</i>	<i>Lyman Beecher, D. D.</i>
Matthew Perkins	George May	Nahum Nixon	1819.
*William Perrin	George R. Minot	<i>David Root</i>	<i>Isaac R. Barber</i>
Benjamin Pettingill	Pliny Moody	Amherst D. Scovell	Joseph Bryan
*James K. Platt	*Willard J. Parker	Daniel H. Skinner	J. L. Burnap
<i>Isaac Read</i>	*Ezekiel C. Parks	Henry Stowell	Galen C. Carter
Ashley Sampson	*Levi Parsons	Joel Turrill	Stephen Coburn
Horace Shumway	Richard Pearce	<i>David Willson</i> 17	<i>Amzi Francis</i>
Job S. Swift	*Philanthrop's Perry	HONORARY.	*Ralph Gowdy
<i>Josiah Town</i> 26	<i>Reuben Post</i>	<i>John Joice, A. M.</i>	<i>Beriah Green</i>
HONORARY.	*Noah Smith	<i>Eben'r Hebard, A. M.</i>	* <i>Jonathan L. Hale</i>
*G. C. Lyman, D. D.	<i>Spencer Wall</i>	Moses Strong, A. M.	* <i>Caleb Hemenway</i>
*A. Pettingill, A. M.	<i>Moses E. Willson</i> 28	S. H. Holley, A. M.	<i>David Metcalf</i>
James Davis, A. M.	HONORARY.	1817.	* <i>Roswell Mills</i>
1813.	<i>Andrew Yates, D. D.</i>	<i>Ethan Allen</i>	* <i>Moses G. Noyes</i>
*Solomon M. Allen	<i>J. J. Janeway, D. D.</i>	*Joseph Brown	Joel Rice
Seneca G. Bragg	* <i>Aaron Leland, A. M.</i>	<i>Jonas Coburn</i>	<i>Heman Rood</i>
Thomas P. Chapin	<i>Sam'l S. Phelps, A. M.</i>	Palmer C. Dorr	Seth P. Storrs
Henry Conant		<i>Justus W. French</i>	<i>Daniel Washburn</i>

MIDDLEBURY COLLEGE.

ALUMNI AND HONORARY GRADUATES.

*P. T. Williams 18	Zep'h Swift, L L D	Bennet Tyler, D D	James B. Wilcox 17
HONORARY.	J. Fisher, A B and M D	*Henry Axtell, D D	HONORARY.
Frank. Sherrill, A.M.	*Henry Wheaton, A B	*Jno. V. Henry, L L D	*Edward Turner, A M
James C. Bliss, A.M.	Edward Tudor, M D	E. Huntington, M D	Richard C. Morse
Clark Kendrick, A.M.	1822.	Wm. Anderson, M D	Benjamin B. Smith
Ammi Nichols, A. M.	George C. Beckwith	S. W. Whelpley, A M	John Kellogg, A M
A. H. Chappell, A.M.	Hiram Chamberlain	Joseph A. Gallup, A M	Charles Walker, A M
Aaron Palmer, A M	Aaron Church	1824.	Thomas Fletcher, A M
1820.	Moses Church	Mervin Allen	Adin Kendrick, M D
Ira M. Allen	*Bicknell C. Cole	Calvin Butler	Paul Wheeler, M D
Isaac O. Barnes	Charles K. Field	Joseph T. Clark	William Bass, M D
Albert Bingham	Roswell M. Field	Charles Cleveland	*David Palmer, M D
Samuel A. Bumstead	Hamilton Goode	*Isaac Cummings	1826.
Abijah Crane	*Horace N. Gray	Nath'l A. Fullerton	John A. Avery
*Edmund Frost	Richard C. Hand	Lyman Gilbert	Philip Battell
Thos. Gildersleeve	*Chester Hinman	H. Goodwin	Ebenezer C. Beach
William F. Hall	George Howe	Solomon Hardy	Jedediah S. Bushnell
Myron Lawrence	John G. Hulett	*Azel Hayward	*Edm. Chamberlain
Stephen Olin	Joseph Hurlbut	Fred'k A. Hubbell	John W. Chickering
James Kimball	Henry Lewis	Cyrus Hudson	Ferris Fitch
Moses Ordway	Lyman Matthews	Cephas H. Kent	Solomon Foot
Alvin H. Parker	Samuel Miller	Rial Lake	Edwin Hall
Ora Pearson	Stephen G. Peck	Arthur Latham	*Nelson Higley
Roswell Pettibone	Erie Prince	Elijah W. Plumb	Seth H. Keeler
Ozias Seymour	William Sargeant	Frye B. Reed	John A. Murray
Cyrus D. Sheldon	John W. Satterlee	*Jared Rice	Martin M. Post
Daniel P. Thompson	Amos Savage	Alva Sanford	Luther Shaw
*Joseph N. Wales	Ezra Scovill	Otis Smith	Adams Shepherd
Wm. E. Whitman	*Dan'l S. Southmayd	Amasa Stewart	Erdiz Tenney
James Wilson	Isaac N. Sprague	John Storrs	Joseph Thatcher
M. T. C. Wing 22	J. L. Van Doren 26	Bradford L. Wales	John Thompson
HONORARY.	HONORARY.	R. A. Watkins 24	Wm. Y. Warren 19
Rob. B. Patton, A.M.	Moses Hale, M D	HONORARY.	HONORARY.
Eli Moody, A. M.	J. L. Comstock, M D	A M	Benj. Silliman, L L D
Joel Clapp, A. M.	Frederick Ford, M D	Joel R. Arnold	A M
Benj. Swift, A. M.	A M	Eli Hunter	Joseph Chickering
1821.	Benjamin F. Landon	*Amos Drury	Moses Chase
Henry L. Aiken	Benjamin W. Dewey	*Robert Temple	Asahel Parmelee
Silas Baldwin	Abijah Blanchard	Joseph Battell	Robert Pierpont
Luther Bingham	Joseph Sawyer	Ephraim Paddock	Roswell Weston
Uzziah C. Burnap	Mason Knapen	Jonathan Wales	1827.
*Wash'n H. Elmore	Ebenezer Brown	Royal Turner	Joseph S. Clark
Nathan B. Felton	Eben H. Dorman	James Spalding, M D	Robert L. Cook
John Foot	1823.	Edward Lamb, M D	Joseph Fuller
Henry L. Fullerton	Joseph Battell	Samuel Head, M D	*Jed'k C. Parmelee
Josiah F. Goodhue	*Julian G. Buel	I. V. Rensselaer, M D	Royal W. Peake
Roswell Harris	Harvey Button	1825.	John B. Preston
Silas H. Hodges	John S. Chipman	Horace Eaton	Lucius M. Parry
Henry B. Hooker	Merritt Clark	Joel Fisk	Thomas Sawyer
*Hiram B. Hopkins	Thomas J. Conant	Chauncey W. Fitch	Henry Smith
Ova P. Hoyt	Alva Day	George D. Gordon	Amos Tuttle
John Ingersol	David L. Farnham	Walter Follett	Charles Whipple
Samuel C. Jackson	*Benjamin Hagar	Israel Hamilton	John Wild
Ezra June	Francis Markoe	Merit Harmon	Enoch C. Wines
Jonathan B. Kidder	Louis McDonald	Harvey O. Higley	Pliny R. Wright 14
Charles D. Mallary	Edgar L. Ormsbee	Herman Hooker	HONORARY.
Samuel B. Mattocks	Addison Parker	Ezra E. Kinne	Gordon Newell, A M
Amasa C. Moore	Miner Pratt	Job H. Martin	1828.
John Stevens	John B. Shaw	Anson Rood	Samuel Allen
*Avery L. Ware 23	Eli B. Smith	Stephen S. Sheldon	*S. R. Burrows
HONORARY.	Lucius L. Tilden	John Spaulding	Joseph N. Chipman
T. Woodward, M D	Alex. Twilight 18	Job S. Swift	Nathaniel C. Clarke
J. P. Batchelder, A M	H. Humphrey, D D	Asahel C. Washburn	Samuel W. Corzons
			*Edward C. Eells

MIDDLEBURY COLLEGE.

ALUMNI AND HONORARY GRADUATES.

Samuel Everts	A M	Winslow C. Watson	HONORARY.
John Goodrich	<i>Amasa Buck</i>	Julius C. Hubbell	<i>Dana Lamb, A M</i>
Fred'k W. Hopkins	<i>Salmon Hurlbut</i>	Silas Crane	John Pierpont, A M
Amzi Jones	<i>Jarvis Z. Nichols</i>	1833.	Eben. N. Briggs, A M
<i>Freeman Lane</i>	<i>John J. Shipherd</i>	Hiram A. Babcock	William Hebard, A M
<i>Sendol B. Munger</i>	<i>Fayette Shipherd</i>	John C. Bates	Horace Green, A M
<i>John J. Owen</i>	Sumner A. Webber	<i>Ward Bullard</i>	I. Southworth, M D
John M. Parker	1831.	<i>Hiram Carlton</i>	1835.
<i>Ira Pettibone</i>	*Edwin M. Barber	Philo G. Cooke	Nathaniel A. Balch
* <i>Ephraim Spaulding</i>	<i>Nelson Barbour</i>	Azariah R. Graves	Edward S. Barrett
<i>Benjamin P. Stone</i>	<i>Harvey Curtis</i>	<i>Joel S. Graves</i>	Prentiss Bates
* <i>Whealock S. Stone</i>	<i>Daniel H. Deacon</i>	<i>Joseph E. Hallock</i>	Rufus K. Bellamy
David B. Tower 19	Bela Fancher	*Thomas H. Hubbell	John Boynton
HONORARY.	Ephraim H. Farrar	Eliezer J. Marsh	Milton Bradley
John Mattocks, A M	*John M. Hooker	George Martin	Bushrod W. Converse
<i>Hiland Hurlbut, A M</i>	Daniel Howard	<i>Charles N. Mattoon</i>	David Dobie
<i>Leland Howard, A M</i>	<i>George C. Hyde</i>	* <i>Lamson Miner</i>	James M. Flagg
<i>Jona. S. Green, A M</i>	<i>Ezra Jonas</i>	<i>C. F. Muzzy</i>	John G. Foote
John Holbrook, A M	Samuel A. Kirby	* <i>Leonard Rawson</i>	Theodore Gay
1829.	<i>Nathaniel O. Preston</i>	*Ezekiel S. Sayres	Daniel Gibbs
Edward D. Barber	<i>David S. Sheldon</i>	E. S. Seymour	Lemuel Grosvenor
Richard R. Bolton	<i>Albert Smith</i>	Marcus Skinner	Henry Hall
Paschal Carter	<i>Buel W. Smith 15</i>	Wm. L. G. Smith	Curtis K. Harvey
<i>G. C. V. Eastman</i>	HONORARY.	Benoni Thompson	Asa Hemenway
Cyrus Farwell	J. B. Williams, L L D	Jesse Walker	Milo J. Hickok
<i>Sheridan Guitteau</i>	J. L. Kingsley, L L D	Edw'd S. Warren 22	Edward F. Hodges
<i>Edwin F. Hatfield</i>	A M	HONORARY.	Edwin Hoyt
Samuel S. Howe	<i>Willard Child</i>	<i>Absalom Peters, D D</i>	Alex' der C. Hunter
Calvin T. Hulburd	<i>Joel Byington</i>	A M	Harvey D. Kitchell
<i>David T. Kimball</i>	Dorastus Wooster	<i>Eli Hyde</i>	Spencer Mattison
Edwin Lawrence	Pierpont Isham	<i>William Mitchell</i>	Allen K. Merrill
Henry B. Northup	1832.	<i>Lyman Coleman</i>	James Moore
William T. Page	William M. Bass	<i>Cyrus Mason</i>	Allen B. Myres
Truman M. Post	Joshua Bates	<i>William S. Perkins</i>	George W. Parker
Daniel Roberts	Jonathan Blanchard	<i>Isaac Westcott</i>	James H. Phelps
<i>Wash'ton Roosevelt</i>	Edward Carrington	<i>Anson R. Hard</i>	Darwin H. Ranney
<i>Thomas J. Sawyer</i>	<i>Jesse Caswell</i>	<i>Peter C. Oakley</i>	Merrill Richardson
*Rollin F. Strong 18	William D. Cooke	Thomas H. Palmer	R. D. C. Robbins
HONORARY	John T. Doolittle	1834.	Zalmon A. Storrs
Silas Bowen, M D	Caleb B. Harrington	Benjamin B. Allen	Samuel R. Thrall
Zaccheus Bass, M D	William J. Hoppin	Charles H. Blair	Norman N. Wood
A M	*Elijah K. Hubbard	Lucien C. Boynton	Steph. R. Wright 34
<i>Samuel C. Loveland</i>	Ephraim H. Jenney	Josiah B. Clark	HONORARY.
<i>Moses Ingalls</i>	<i>Daniel Ladd</i>	Miron M. Dean	<i>Eben'r Burgess, D D</i>
<i>Jonathan Meriam</i>	<i>Robert F. Lawrence</i>	<i>Cyrus B. Drake</i>	A M
*Noah Hawley	<i>R. S. Lockwood</i>	*Alanson Fish	<i>Jedediah Bushnell</i>
John Smith	* <i>S. L. Matthews</i>	Russell L. Galusha	George B. Manser
1830.	John Mattocks	<i>Charles Goodrich</i>	Reuben Spaulding
Alexander W. Buel	Henry B. M'Clure	<i>Hiram A. Graves</i>	<i>James Anderson</i>
Romeo H. Hoyt	<i>James Meacham</i>	Thomas S. Hubbard	<i>Merrill Bates</i>
<i>George B. Ide</i>	Charles Miller	Henry T. Huggins	Charles Linsley
Hiram Jones	Andrew Naudain	Charles W. Jewett	Wm. S. Southworth
Nehemiah H. Losey	*Aurelius H. Post	<i>Calvin D. Noble</i>	Azel Spaulding
<i>Samuel Newbury</i>	Benj. W. Reynolds	Charles Paulk	1836.
William H. Parker	William Scales	Lyman B. Peet	Samuel A. Benton
*James Randles	Horace Seymour	<i>James T. Phelps</i>	Joshua D. Berry
John Stewart	Homer H. Stewart	Orson Rockwell	Aaron H. Bigelow
<i>John Stocker</i>	John S. Storrs	Seth Sabine	John Blake
Gilbert T. Thompson	Halsey R. Wing 27	Asa B. Smith	Calvin P. Bliss
Francis P. Whipple	HONORARY.	<i>Oliver H. Staples</i>	Charles E. Bowen
Horace Wilcox 13	Joel Green, M D	William H. Starr	Nathan S. Boynton
HONORARY.	Josiah W. Hale, M D	James A. B. Stone	James D. Butler
Noah Webster, L L D	A M	De Witt C. Walker	Calvin B. Cady
A. G. Dana, M D	<i>Tobias Spicer</i>	Geo. C. Whitlock 25	John E. Claghorn

MIDDLEBURY GRADUATES.

CASTLETON MEDICAL COLLEGE.

Louis Doolittle	S. P. Giddings	Edward S. Shumway	Edward W. Johnson
William D. Griswold	Storrs Hall	James H. Smith	Myron W. Johnson
<i>Zebulon Jones</i>	John Hough, Jr	Calvin T. Solace	Adam Johnston
Louis S. Lovell	Clark B. Hubbard	Erastus C. Spooner	Lysander Kelsey
William S. Martin	Azariah Hyde	Eliphalet Y. Swift	Edward P. King
Merritt Mattison	Daniel Halsey	George S. Swift	Alexander Miller
Dayid Mower	Henry Kingsley	Lathrop Taylor	Alfred Miller
Josiah W. Peet	John J. Latting	Norman H. Wright	E. C. S. Miller
Ashley Samson	Nathaniel C. Locke	T. K. Wright 37	George Page
Calvin Sheldon	Gad Lyman	HONORARY.	Edward J. Phelps
Asael B. Watrous	N. A. McMillan	A. H. Everett, L. L. D.	Extra W. Sherman
*George S. Swift	Jonathan F. Moore	Wm. Jackson, D. D.	Royal G. Wilder 21
*Samuel C. Swift	Sylvester L. Nevins	A. M.	HONORARY.
Robert R. Wells	F. W. Olmstead	Alex' der C. Twining	T. P. Redfield, A. M.
John H. Whiteside	Rufus B. Olmstead	Charles B. Adams	S. B. Colby, A. M.
Samuel M. Wood 25	James W. Ransom	Augustus C. Hand	1841.
HONORARY.	George F. Ruggles	<i>John F. Stone</i>	Rollin D. H. Allen
Alexis Ward, A. M.	Jona. A. Shepard	Samuel Chipman	Lucas Dorland
B. Davenport, A. M.	Samuel S. Sherman	1840.	Darius M. Linsley
1837.	Horatio A. Smith	Julius A. Beckwith	Julian M. Loveland
Chauncey Abbott	John C. Smith	Samuel W. Cheney	Adam K. Miller 6
John Adams	Ebenezer H. Squier	Henry B. Farrar	HONORARY.
Sheridan F. Bates	Enos Stevens	Henry G. Foote	<i>Thos. W. Jenkyns, D. D.</i>
Sylvanus Bates	Byron Sunderlin	Orson G. Foster	A. M.
William Bates	Jesse E. Tenney	Matthew D. Gordon	<i>Cyrus Prindle</i>
Elias B. Burton	Edgar P. Wadhams	Jeremiah Hatch	<i>Vernon Wolcott</i>
William J. Brown	George S. Walden	Peter Henderson	<i>Joshua B. Graves</i>
William H. Conkey	John H. Weir	Henry N. Hudson	<i>Charles Doolittle</i>
Rufus C. Cushman	John G. Wellington		
Edson Forbes	*Philander Wilder	Whole number of Alumni, 785	
Joseph Huntington	E. R. Wright 43	" " of Honorary graduates 223	
Henry Page	HONORARY.	In addition to these, 254 recommended	
John Ramsdell	<i>George E. Pierce, D. D.</i>	by the faculty of the Castleton Medical	
Amos J. Lamson	Sol. Stoddard, A. M.	School, have received from this College	
Henry A. Sheldon	<i>Cyrus W. Hodges, A. M.</i>	the degree of M. D., but their names are	
George W. Strong	1839.	given in the list of the alumni of the Cas-	
Lucius A. Swift	Hiram Bingham	tleton School.	
William Warner	Charles C. Bisbee		
Leonard H. Wheeler	John Bradshaw		
William Wines	Gorham B. Clark		
John T. Wolcott	D. S. F. Douglass		
Julius L. Wyman 22	Edwin Everest		
HONORARY.	Bethel Farrand		
A. M.	Melvill L. Gray		
<i>William C. Fowler</i>	Zera Hamilton		
<i>Harvey F. Leavitt</i>	James Harran		
<i>Samuel M. Worcaster</i>	David L. Hough		
<i>Thomas Kidder</i>	William A. Howard		
Lorenzo Sheldon	Samuel Hurlbut		
Joseph Perkins	W. L. James		
Alman L. Miner	William F. Kent		
1838.	Daniel L. Kapen		
Henry W. Allen	S. S. Lathrop		
Nathan Barton	Alexander McLean		
William F. Bascom	George A. Miller		
*Osman R. Castle	Anson H. Parmelee		
William F. Dibble	Kinne Prescott		
James M. Douglass	Joseph A. Ranney		
Edward E. Eastman	Timothy E. Ranney		
Asa Farwell	Werden Reynolds		
Alfred A. Finney	Moses Robinson		
Andrew S. Flower	Myron W. Safford		
David Foote	John G. Saxe		
Stillman Foote	Luther H. Sheldon		

CASTLETON MEDICAL COLLEGE.

CATALOGUE.

such students of said academy as they shall find worthy thereof." By an act of November 7, 1842, the name of the institution was altered to *The Vermont Academy of Medicine*. In 1820, a conventional connexion was formed between this institution and Middlebury college, by which degrees of Doctor of Medicine were conferred on such students of the institution as were found worthy, either at the annual commencement of Middlebury college, or at the annual commencement in Castleton at the close of each lecture term, which connexion ceased to exist in 1827.

This institution owes its origin, and much of its prosperity in subsequent years, to the enterprize, resources and unwearied exertions of Doctors Gridley and Woodward. The amount of patronage received by this school and its successful operation until 1838, are highly commendatory of the wisdom of its trustees and the ability of its teachers. Until 1835, lectures were given in one annual lecture term of 14 weeks; during the years 1835, '36 and '37, the lecture terms were semi-annual, the spring term commencing in March, and the fall term in August—each term being 14 weeks. Near the anticipated opening of the spring term of 1838, the severe indisposition of professor Woodward, which terminated his career of usefulness, and the unexpected declination of two members of the faculty to engage in the organization of a rival school, and some other unpropitious events, served to interrupt and suspend the operations of the school during the two following years.

In 1839, the Vermont Academy of Medicine was re-organized and a new faculty elected, and in March, 1840, the school was re-opened by an annual spring term of 14 weeks. After reverses so severe, it was not anticipated that confidence and patronage would at once be regained by the institution. The anticipations, however, of its friends were more than realized, both in this and the succeeding session, and their efforts were unremitted to place the school on a permanent basis with advantages equal to any in the country. During the year 1841, the lecture rooms were entirely remodeled, so as to combine the most perfect convenience, neatness and elegance. The material of the anatomical museum has recently been much increased by the accession of professor McClintock's splendid preparations and paintings; and a new room, 30 feet by 20, has been fitted up in a neat and commodious manner, for their reception and exhibition. There has also been added, in a separate apartment, cabinets of materia medica and mineralogy.

By an act of the general assembly, passed October 22, 1841, the name of the Vermont Academy of Medicine was altered to the *Castleton Medical College*, which was deemed more expressive of the character and chartered privileges of the school. The libraries of the resident faculty, which are accessible to pupils of the reading term and private lectures, render the privileges of reading as ample and valuable as can be enjoyed in any other institution in the country. The advantages of well conducted reading terms and private lectures, are regarded by the faculty of this school, as scarcely secondary to public lectures; and it is their design to approximate so far as practicable to the collegiate system of regular and frequent recitations and instructions, and surveillance of the reading of medical students. The annual course of lectures in Castleton Medical College, commences on the second Tuesday of March and continues 14 weeks. The fee for admission to all the lectures is \$55; the graduation fee is \$16. The degree of Doctor of Medicine is conferred by the president, on such candidates as are approved by the faculty, on the last day of the session, or at such other times as may be designated by a majority of the faculty.

During the interval of the public lectures, instruction is given to students at the college by the resident members of the faculty, doctors McClintock, Perkins and Jamieson. This instruction consists of reading and recitation by classes, and a summer course of lectures, on the anatomical tissues and physiology; botany and indigenous materia medica, and chemistry; also, a fall or winter course on anatomy and operative surgery. It is especially the design of this institution to afford facilities and means so ample, for the acquirement of a thorough knowledge of anatomy, that country students shall not be compelled to resort to the cities, at an increased pecuniary expenditure, and the exposure of health and morals.

CATALOGUE.

CORPORATION, OFFICERS AND GRADUATES.

<i>Presidents.</i>	
<i>Elected.</i>	<i>Exit.</i>
1818 *Selah Gridley, A. M.	1819
1819 J. P. Batchelder, A. M., M. D.	1820
1820 Joseph A. Gallup, A. M., M. D.	1823
1824 William Tulley, A. M., M. D.	1839
1839 Horace Green, M. D.	1841
1841 James McClintock, M. D.	

<i>Corperation.</i>	
1818 *Selah Gridley, A. M.	1825
1818 *Theo. Woodward, M. D.	1840
1818 T. P. Matthews, A. M.	1820
1819 *Hon. C. Langdon, A. M.	1830

CASTLETON MEDICAL COLLEGE.

OFFICERS AND GRADUATES.

1819	Rev. Elihu Smith, A. M.	1831	1822	William Anderson, M. D.,	
1819	*Leonard E. Lathrop, A. B.	1829		<i>Anatomy and Physiology</i> , 1824	
1819	*John Meacham, Esq.	1839	1822	Jonathan Allen, M. D.,	
1819	John Goodwin, Esq.	1825		<i>Mat. Medica and Pharmacy</i> , 1829	
1819	James Adams, Esq.		1824	William Tully, M. D.,	
1819	Hon. Zimri Howe, A. M.			<i>Theory and Practice and</i>	
1819	J. P. Batchelder, A. M., M. D.	1822		<i>Medical Jurisprudence</i> , 1839	
1820	J. A. Gallup, A. M., M. D.	1824	1825	Alden March, M. D.,	
1820	Amos Eaton, A. M.	1822		<i>Anatomy and Physiology</i> , 1835	
1822	Jonathan Allen, M. D.	1822	1826	Lewis C. Beck, M. D.,	
1823	William Anderson, M. D.	1824		<i>Botany and Chemistry</i> , 1839	
1823	Rev. Ethan Smith,	1827	1826	Amos Eaton, A. M.,	
1823	Rev. Joshua Bates, D. D.	1835		<i>Natural Philosophy</i> , 1829	
1823	Hon. C. K. Williams, A. M.	1830	1828	Solomon Foot, A. M.,	
1825	Henry Howe, A. M.	1827		<i>Natural Philosophy</i> , 1833	
1827	Wm. Tully, A. M., M. D.	1839	1833	John D'Wolfe, A. M.,	
1828	Benj. F. Langdon, A. M.			<i>Chemistry and Nat. History</i> , 1839	
1828	Joseph Perkins, M. D.		1835	James H. Armsby, M. D.,	
1830	*Selah H. Merrill, A. M.	1839		<i>Anatomy and Physiology</i> , 1839	
1830	*Samuel Moulton, Esq.	1838	1839	Horace Green, M. D.,	
1830	Ezekiel Buel, Esq.	1838		<i>Theory and Prac. of Physic</i> , 1841	
1830	*Orlando Nelson Dana, Esq.	1840	1839	Joseph Perkins, M. D.,	
1839	Jonathan D. Woodward, M.D.			<i>Mat. Medica and Obstetrics</i> .	
1839	Chester Spencer, Esq.		1839	James Hadley, M. D.,	
1839	Aruna W. Hyde, Esq.			<i>Chemistry and Pharmacy</i> , 1841	
1839	M. G. Langdon, Esq.		1839	Robert Nelson, M. D.,	
1839	Oliver R. Harris, Esq.			<i>Anatomy and Physiology</i> , 1840	
1839	Timothy W. Rice, Esq.		1839	James Bryan, M. D.,	
	<i>Secretaries.</i>			<i>Surgery and Med. Juris.</i> , 1841	
1818	Thomas P. Matthews, A. M.	1819	1841	James McClintock, M. D.,	
1819	*Theo. Woodward, M. D.	1821		<i>General, Special and</i>	
1821	Hon. Zimri Howe, A. M.	1834		<i>Surgical Anatomy</i> .	
1834	Selah H. Merrill, A. M.	1839	1841	Frank H. Hamilton, M. D.,	
1839	*Orlando N. Dana, Esq.	1840		<i>Prin. and Proc. of Surgery</i> .	
1840	Timothy W. Rice, Esq.	1841	1841	C. L. Mitchell, M. D.	
1841	Israel Davey, Esq.			<i>Physiology, Gen. Pathology</i>	
	<i>Treasurers.</i>			<i>and Operative Obstetrics</i> .	
1818	Noah Hoit,	1819	1841	David M. Reese, M. D.,	
1819	*Theo. Woodward, M. D.	1821		<i>Theo. and Prac. of Medicine</i> .	
1821	John Goodwin, Esq.	1825	1841	Wm. C. Wallace, M. D.,	
1825	B. F. Langdon,	1839		<i>Ophthalmic Anat. and Surgery</i> .	
1839	Isaac T. Wright, Esq.		1841	William Mather, M. D.,	
	<i>Professors.</i>			<i>Chemistry and Pharmacy</i> .	
1818	*Selah Gridley, A. M.,		1841	William P. Russell,	
	<i>Theo. and Prac. of Medicine</i>			<i>Medical Jurisprudence</i> .	
	<i>and Materia Medica</i> , 1820			<i>Registrars of the Faculty</i> .	
1818	*Theo. Woodward, M. D.,		1823	*Theo. Woodward, M. D.	1839
	<i>Surgery and Obstetrics</i> , 1839		1839	Joseph Perkins, M. D.	
1818	J. Leconte Cazier, A. M.,			<i>Graduates.</i>	
	<i>Chem., Anat. and Physiology</i> , 1819			1819-'20.	Joel Fairchild
1818	Thos. P. Matthews, A. M.,			Dan Pond	*Greenleaf Fifield
	<i>Chem., Anat. and Physiology</i> , 1820			Franklin Shaw.	2 Frederick Ford
1819	John P. Batchelder, M. D.,			1820-'21.	Moore Hoit
	<i>Anatomy and Physiology</i> , 1822			Leonard Chase	*Charles Luce
1820	Selah Gridley, A. M.,			*Nathan Farnsworth	Zina Pitcher
	<i>Clin. Prac. and Med. Juris.</i> , 1824			Horace Parker	Joel Rice
1820	Thos. P. Matthews, A. M.,			Joseph Perkins	John Smith
	<i>Chemistry</i> , 1821			Alva Southard	Jedediah Smith
1820	Amos Eaton, A. M.,			Edward Tudor.	6 Dan'l Sturtevant. 13
	<i>Botany, Chem. and Nat. Phil.</i> , 1826			1821-'22.	HONORARY.
1820	Joseph A. Gallup, M. D.,			Franklin Bradley	Moses Hale.
	<i>Theory and Practice and</i>			*Luther Deming	1822-'23.
	<i>Materia Medica</i> , 1823			Benjamin Dewey	Calvin Brown

CASTLETON MEDICAL COLLEGE.

ALUMNI AND HONORARY GRADUATES.

Simeon Cook	Franklin Branch	G. M. Millspaugh	John Drake
John Currie	Alanson Burroughs	John Merrill	Atherton Hall
Artemas Doane	Charles Burrows	Benjamin Morgan	Caleb Hill
*George Ellis	Davis Carpenter	Samuel Nichols	James Hough
Jesse Everett	Silas Clarke	Nelson Peck	Henry Laughlin
James Forsythe	Peter Ferris	Amos Pollard	David McCluer
Dana Hyde	Moses Ludwig	Fletcher Ransom	James H. Morton
Paul Moore	Nathaniel Manning	*Eli Reed	David Parker
Eliakim Paul	John McClary	Joseph Richards	Chester Perkins
Moses Porter	Angus McDearmid	Alonzo Rockwell	Alvah Paul
Truman Shaw	James McKee	Leonard Root	Seth S. Ransom
Socrates Smith	Jean B. Meilleur	Martin Root	Wareham Root
Horace Shumway	Oliver B. Norton	John Rowan	Asa Snell
Dan C. Stone	Stephen Ostrander	Warren Sargent	Erasmus D. Warner
Carter D. Stone	John Phelps	David Smiley	Nathaniel White
Sewell Walker. 17	Gustavus Pope	Edward Smith	M. W. Woodward
HONORARY.	Harold Pope	Dudley Waller	Dan Wright. 26
William Anderson	Henry Proctor	L. G. Whiting. 36	HONORARY.
*Ebn'r Huntington.	Thos. Gildersleeve	HONORARY.	James Carter
1823-'24.	*Ralph Gowdy	Locke Chandler	Frederick Hall
Benjamin Bailey	Horace Green	John Diskerson	Jonathan Mosher.
Isaac Bailey	Lowell Guernsey	Peter Millspaugh	1828-'29.
Bushnell Carey	Henry Haile	James Porter.	James Allen
Albert Clarke .	Moses Hart	1826-'27.	B. F. Bosworth
*Asa Cogswell	John Hastings	George Armington	Edward Brace
Cephas Dunning	Isaac Ives	Ira Bachus	Isaac Branch
Stephen Farrington	Judah C. Landon	Ira Barton	James C. Brown
John Geraedet	Ebenezer Lindsey	Hiram Brown	John F. Burdick
Isaac Garrison	Abram Lowell	Reuben Chapman	Nathan Collins
George Graves	Lorenzo Sheldon	Jonathan Colvin	Robert B. Cram
*Almon Green	Socrates Sherman	Daniel Corliss	Charles Chandler
Hinman Griswold	Whipple Spooner	Alexander Cowles	Horace Eaton
Nathaniel Hall	Robert Stevenson	Eber Crandall	*Ira M. Fraser
Chester Johnson	Joseph Sutphen	John W. Crane	Amos A. Frisbie
Roswell Kinney	*John Webb	Samuel Fifield	Zophar W. Furbur
*Edward Lewis	Roswell Webb	Charles Gidney	Harmon Hurlburt
Alvan McAllister	Hosea Wheeler	Joshua Hall	Henry Kilburn
Wm. McLeod	Charles White	Abijah Howard	Algernon S. Lewis
Hiram Paddock	Thos. Wilkinson	Nathan Judson	Franklin Moulton
Benjamin Palmer	Gaius Wood. 44	Lester Kingsley	Horace Seaman
John Pettes	HONORARY.	Ezra Loomis	Hiram Sheldon
Frederick Scofield	William Bass	Ezra Mulford	Guy B. Shepard
David Shepard	Adin Kendrick	Thomas J. Noyes	John Steele
Lemuel Sherwood	*David Palmer	Fletcher Ransom	Jefferson Stone
Albert Smith	Paul Wheeler.	Alvah Randall	John N. Sumner
William Snow	1825-'26.	Maro M'L. Reed	Lemuel W. Weeks
*Stilman Spaulding	Amos Allen	Cyrenus Thompson	F. Wheelock. 25
Heman Tucker	Wm. Backus	Luther Tracy	HONORARY.
George Tuttle	Russel Bailey	Benj. Van Zandt	William Bigelow
Peter Van Keuren	Augustus Bigelow	Harvey Vinton	Caleb Burge
Jacob Van Sycklin	Elliot Brown	*S. Whiting. 27	Elial Foote.
Thomas Weatherell	Harvey Carpenter	HONORARY.	1829.
Hezekiah Wells	Jervis Carey	John L. Chandler	Peleg C. Barlow
J. D. Woodward. 34	Larkin B. Cole	Waitstill Ranney.	Savillion Belknap
HONORARY.	Stephen Collins	1827-'28.	James D. Button
Samuel Head	Abner Dayton	John V. W. Abbott	Charles Clark
Edward Lamb	*John French	George Allen	John Collins
James Spaulding	Nathan Gale	Job Boggs	Asa Fitch
J. Van Rensselaer.	Thomas Ingalls	*Jeremiah Burge	Henry K. Foote
1824-'25.	David Joyalin	Alvah Carpenter	Jonathan Foote
Jonathan Abbott	Ariel Kendrick	Abijah Case	John Gilbert
Thomas Baldwin	Samuel Kimball	Jonathan Chandler	Ira Hatch
Asahel Beach	*Calvin Lewis	Benj. F. Cornell	James Heath
William Bell	Martin Mason	Ira Dimick	Wm. A. Hitchcock

CASTLETON MEDICAL COLLEGE.

ALUMNI AND HONORARY GRADUATES.

Asahel Houghton
Robert Kelsey
Isaac Monroe
James F. Mazusan
Amos Nickerson
George Peets
T. F. Parker
Alex. Steele
Cyrus Sayles
James M. Willson
David Wilson
Albert Wright 24

HONORARY.

Chichester Brown
John Fox
Henry Green
Samuel McClellan.
1830.

Dudley Bebee
Erskine G. Clark
Charles V. Dyer
*O. H. Douglass
William C. Fox
Sidney S. Gibbs
Thomas D. Lee
Jonas C. Maine
Harvey Marvin
Wesley C. Norwood
Marcus O. Porter
Julius Roberts
Elisha H. Rockwood
Charles Smith
Lucius Smith
Kirtland T. Warner
Benadan Kasson. 17

HONORARY.

Stephen Brownson
Cornelius Holmes
James Post
Robert Safford.

1831.

James B. Ashley
Smith A. Boughton
James R. Blanchard
Asa Clemans
Wm. U. Edgerton
J. McComb Foster
Royal Gurley
Theodore Lewis
Edward J. Moore
Abiathar Pollard
Erasmus D. Post
Wm. P. Proudfit
John P. Robinson
Alex. J. Spencer
Abram D. Smith
Simeon P. Smith
Harvey Smith
Lyman Thompson
J.W. Chamberlin. 19

HONORARY.

Theodore May
Edwin L. Miner
Henry Sargeant

Cornelius Van Dyke
1832.

Chauncey Black
G. W. Blake
Herrick Bromley
Chauncey Brush
Salmon Brush
Augustus Case
Phineas Kenyon
Orimel Martin
Cornelius Orms
John H. Philip
Matthews Ransom
Luman Tenny
Spencer Ward
Dexter Fox
Samuel Hopkins
Lorenzo Hubbard
Adams Weston
Joshua Kendall
Dayton Spencer. 19

HONORARY.

Virgil M. Dow
William Richards
Baltus Van Kluck.
1833.

Jabez Allen
Vine A. Allen
James H. Armsby
Ezra F. Barker
Joseph Bates
Lemuel W. Briggs
Martin H. Cowles
Volney Danforth
Daniel Durgan
Harvey G. Ford
John Gasley
Thos. B. Glysson
William Gorham
Daniel Gould
John Gurley
E. W. Howard
John L. Near
Wesley Newcomb
Thomas Richards
Calvin Spencer
A. Stoutenburgh
Lyman Tenny
Dean Towne
John Wallace
Wm. C. Warner
Linus S. Wells
David Wheeler
Elisha Williams
Amos A. Witherell
William Wright
David R. Burrus
Thomas Connally. 32

HONORARY.

Alexander Arnold
Lemuel Wells.

1834.

George L. Adams
James H. Barnes

Henry S. Brown
Joseph R. Brown
George Cook
John Cook
Ely Cook
W. Cochran
Luther P. Cowles
David Crary
Ira Dales
Henry Dewey
Stephen Forman
Samuel H. Graves
George C. Howard
Carlton E. Miles
Lorenzo L. Patrick
Zoroaster Paul
Hiram S. Potter
Abraham Sagar
Nehemiah C. Sibley
Joseph D. Stewart
Daniel Ward
Ezekiel Y. Watson
Henry M. Witherill
Andrew Wolf
James R. Wood
John C. Fuller 28

HONORARY.

William Aiken
Benj. Friedenburgh
Richard Sill.

1835.

Spring Term.

David V. Ackerman
Elmer Beecher
James Berry
Samuel C. Brown
Thompson Burton
Samuel Clark
James S. Ewing
J. B. F. Fuller
Elbridge G. Gale
Matthew Gill
David C. Goodale
Lorenzo James
Benj. D. Knapp
Samuel Lacy
Cyrus V. N. Lent
Galen J. Locke
Abel Lyon
David H. Meacham
Oliver D. Osgood
Charles H. Payn
John L. Perry
Simon G. Place
Robert B. Porter
Heman Shaw
John W. Titus 25

HONORARY.

Charles Backus

Fall Term.

Alexander Abbott
George W. Blair
James W. Bracket
W. C. Collins

Jonathan Dodge
W. C. Farrington
Benj. Globensky
Anson Goodspeed
Daniel Henn
W. H. E. Hook
Ebenezer Howell
Curtis Lowry
Seneca E. Park
James Rowland
Eli Saunders
Azariah B. Shipman
Richard Sill
James H. Thompson
Ambrose E. Todd
Joan M. F. Trudeau
Eleazer B. Wood. 21

HONORARY.

Hiram S. Newman
Harmon Tucker
Joseph Henry

1836.

Spring Term.

Charles C. Beman
Reuben Blawis
Sylvester Cartier
Jesse A. Crowley
John P. Cruger
David M. Dake
Harvy F. Deming
Henry A. Guavin
Milton W. Gray
Sylvanus Huntton
Smith Inglehast
John Mack
Orville Reynolds
John F. Taylor
Oscar F. Thomas
Socrates H. Tryon
Abram Van Woert
Charles C. Wallin
Charles Wood
Ed. M. Wheeler 20

HONORARY.

John P. Higgins
Henry Benham
James Wade

Fall Term.

John Babcock
Erasmus D. Baker
James Brown
C. B. Chapman
Charles Dorion
Wm. B. Donagani
William Dorr
John Ferguson
A. A. Gardner
Andrew C. Getty
H. E. W. B. Hall
Alonzo Harlow
Geo. F. X. Holmes
James Mason
Zenas McKain
Robert McKensie

ALUMNI AND HONORARY GRADUATES.

VERMONT MEDICAL COLLEGE.

John S. Miller
Samuel Potter
Isaac S. Stackpole
Benjamin Weeks
Bennet Wing
Samuel S. Wright
Calvin S. Wells. 23

HONORARY.

Joseph Braman
Solomon Dean
William Noble
William Perrine
Mather Williams
1837.

Spring Term.

E. A. Anderson
Edward S. Belleau
Israel M. Brown
John Branch, jun.
Henry Cartier
Lucian P. Cheney
A. P. L. Consigny
Ira De La Mater
Jean B. Desrosiers
George W. Fish
George S. Gale
John R. Goodrich
W. Halsey, jun.
Hosea A. Hamilton
Thomas M. Hayes
N. M. Herrington
William Holmes
O. A. Hollenbeck
Egbert Jamieson
Myron Knowlton
Van Buren Lockrow
Joseph Lusingan
Henry Miller
Joseph N. Northrop
Jacob H. Norwood
Henry P. Pulling
Fred. A. Putnam
Lewis Reynolds
Russell Tiffany
Lucius A. Thomas
U. H. Wheeler
Joseph Whelpley
S. G. Stickney. 33

HONORARY.

Abraham Pulling.

Fall Term.

Timothy Amiot

Fred. R. Bailey
John C. Benham
Ephraim Brewster
D. C. Chamberlain
James Christie
I. Des Rviores
Nahum P. Monroe
Stephen G. Talmage
Louis H. Ferland
Robert Frasier
Alpheus Goodman
Charles F. Goss
Joseph N. Gouin
Edward Grew
Henry R. Hamilton
John B. Holmes
Ezekiel M. Wade
David D. Wilcox
DeW.C. Willoughby
Geo. H. Young. 21

HONORARY.

Eli Bois
John De Wolf, jun.
1840.

Elon G. Carpenter
Theodore Gay
Robert Hathaway
James Sandford
Fred. P. Wheeler
John A. Yates. 6

HONORARY.

Moses Cobb
Chas. W. Horton.
1841.

Henry Baxter
Davis L. Carroll
Solomon Deck
James Ferguson
Backus H. Haynes
John M. Johnstone
Hiram Monroe
J. N. Northrop
Edwin H. Sprague
C. A. L. Sprague
J. Tunnicliff, jun.
T. G. Walker
Wm. S. Way. 13

HONORARY.

Wm. C. Wallace
John Salter
Nelson Monroe.

Whole number of Alumni, 531
" " of Honorary graduates, 63

SECTION VI.

Vermont Medical College.

This institution owes its origin to the labors and efforts of Dr. Joseph A. Gal-

lup. Soon after the dissolution of his connection with the Vermont Academy of Medicine at Castleton, he commenced preparations for opening a medical school at Woodstock. A suitable building having been prepared, lectures were commenced, and the first course given in the autumn of 1827. The institution received the name of the "Clinical School of Medicine," and the students for several years received their degrees from Waterville College, in the state of Maine. In 1830 a connection was formed between this institution and Middlebury College, in consequence of which the President of that College attended the anniversaries of the school at Woodstock, and conferred degrees upon such students as were recommended for that purpose by the medical faculty. This arrangement continued till 1836.

In October, 1835, an act of incorporation was obtained from the legislature of the state, and the institution took the name of the *Vermont Medical College*. By this act it was constituted an independent medical school, and was placed under the direction of a board of trustees, with power "to give and confer all such medical degrees, honors, diplomas, or licenses as are usually given or conferred in colleges or medical institutions." The same act also provided for the annual appointment of a board of examiners by the judges of the supreme court.

The annual lecture term in the Vermont Medical College at Woodstock, commences on the *second* Thursday in March, and continues 13 weeks. Examinations are held at the close of the lecture term, in the presence of the trustees, faculty and board of examiners, and degrees are conferred upon such as are entitled to receive them. Fee for the course of lectures \$50; fee for those, who have attended two full courses at a regularly established medical school, or schools, \$10; graduation fee \$18. In the recess of the lectures, there is a reading term, in which instruction is given to resident students in connection with daily recitations. The reading term is conducted by Dr. Palmer, and the fee is \$10 per quarter.

Previous to its incorporation, the medical school at Woodstock was controlled principally by its founder, Dr. Gallup, who procured the assistance of such lecturers as were deemed necessary. Since that period, the affairs of the institution have been managed by a board of trustees, a list of whom, together with the officers and medical faculty since its incorporation, and all the graduates from the beginning, is contained in the following

VERMONT MEDICAL COLLEGE.

FACULTY AND GRADUATES.

CATALOGUE.

TRUSTEES, OFFICERS, AND GRADUATES.

Elected.	Presidents.	Exit.
1836	Henry H. Childs, M. D.	1839
1839	*David Palmer, M. D.	1840
1841	Henry H. Childs, M. D.	

Trustees.

1835	*David Palmer, M. D.	1840
1835	Henry H. Childs, M. D.	
1835	Willard Parker, M. D.	
1835	Rev. B. C. C. Parker	
1835	John A. Pratt, Esq.	
1836	Norman Williams, A. M.	
1837	Robert Watts, Jr., M. D.	
1839	Gilman Kimball, M. D.	
1841	Hon. Jacob Collamer, A. M.	

Vice President.

1836	Rev. B. C. C. Parker
------	----------------------

Secretary.

1836	Norman Williams, A. M.
------	------------------------

Treasurer.

1839	John A. Pratt, Esq.
------	---------------------

Faculty of Medicine.

1836	Henry H. Childs, M. D.,	
	<i>Theory and Practice of Medicine,</i>	
1836	David Palmer, M. D.,	
	<i>Chemistry and Materia Medica,</i>	1840
1836	Willard Parker, M. D.,	
	<i>Anatomy and Physiology.</i>	
1836	R. Watts, Jr., M.D.	<i>Anatomy,</i> 1841
1836	Jacob Collamer, A. M.,	
	<i>Medical Jurisprudence.</i>	
1838	Gilman Kimball, M. D.,	
	<i>Surgery,</i>	1840
1840	Phineas Spalding, M. D.,	
	<i>Surgery.</i>	
1840	Benjamin R. Palmer, M. D.,	
	<i>Materia Medica and Pharmacy,</i>	1841
1841	Robert Watts, Jr., M. D.,	
	<i>Principles and Prac. of Surgery.</i>	
1841	Alonzo Clark, M. D.,	
	<i>Chemistry and Materia Medica.</i>	
1841	Benjamin R. Palmer, M. D.,	
	<i>Anatomy and Physiology.</i>	

Graduates.

1830.	
Calvin Allen	Horace Austin
Leonard Barton	Volney Church
John F. Carpenter	Jonathan C. Hall
Willard P. Gibson	F. L. Kidder
Abraham Harding	Willard Kelsey
Isaac Minard	Job G. Littlefield
Stillman Ralph	J. F. Miller
Jacob Rice	Dalson Morton
Oliver Russ	Ludovici Patch
Nathan H. Thomas	Royal Sharp
Erasmus Winslow 11	Guy Staughton
HONORARY.	Aaron Sumner
Joseph A. Denison.	William F. Tilton
1831.	B. O. Tyler
Orson M. Allaben	W. A. Watkins. 16

HONORARY.

Daniel Huntington
John Cleveland.
1832.
William R. Adams
Joel Anger
Edward Barton
J. M. G. Blodget
I. D. Carpenter
Seneca Carter
Ira Clement
Oliver J. Corbin
Hiram Crandall
Sanford Emery
Phineas Fletcher
Charles Hoit
A. H. Jaquith
W. B. Lincoln
William M. Lyman
T. B. Marston
Horace May
J. H. Morse
John Mosher
John Paul
Hiram Perkins
Thaddeus Phelps
James B. Porter
Horace Powers
Charles S. Sterling
Herman H. Smith
Oliver E. Strong
David Whitney. 28

HONORARY.

Peter Renton
1833.
William C. Anthony
P. D. Bradford
Alfred Gale
Lewis F. Gallup
Erasmus Hamilton
Albert Kendrick
William Kilburn
Ira A. Knapp
*A. F. Leffingwell
John E. May
Hiram Morgan
Isaiah Morgan
Mordecai Morton
John Robinson
Washing. Rossman
Joseph Tefft
Joel Vaile
Charles S. Ward
Seth E. Winslow. 19
1834.
Luther H. Barber
William H. Bissac
Nelson Coburn
*Richard H. Colfax
Harvey Everett
Allen C. Fay
John Meigs
Nathaniel Mitchell
Benjamin R. Palmer

*Darwin C. Perry
Lemuel Richmond
William B. Shaw
Benjamin Stout
William H. Taylor
James M. Tefft
E. Austin Webb
J.M. Woodworth. 17

HONORARY.

Isaac Southworth.
1835.
Sanford Atherton
Thomas W. Bailey
Clark Blaisdell
Israel E. Carter
*William O. Caryl
C. C. Chaffee
Seth L. Childs
Salmon H. Morill
David S. Morse
Thomas S. Moxley
Charles Perry
Anson L. Pettee
Dewey H. Robinson
William B. Small
Alanson Stockwell
Duncan Wilson. 16
1836.
W. O. Chamberlain
Henry A. Childs
Josiah Fleeman
William E. Ide
Josiah Miles
James Mason
Isaac D. Proctor
H. H. Robinson
John O. Wade
Jacob A. Wood
E. D. Worcester. 11
1837.
David W. Bailey
Daniel A. Belknap
Rial Blanchard
George W. Bliss
A. S. Carpenter
John F. Dagget
Charles Doron
Thomas Gordon
John L. Kellogg
William M. Ladd
D. L. Lyman
Harrison Macintosh
Elias L. Munger
W. C. Pierce
K. D. Webster
Asahel H. Wildes. 16
1838.
Richard F. Adams
Julius S. Barstow
Solomon Blood
Benoni Cutter
Amos Eastman
Asa P. Hammond
George Hastings

ALUMNI AND HONORARY GRADUATES.

MEDICAL SOCIETIES.

William B. Hatch
Cassander F. Ide
George F. Ingalls
Sylvester Mason
Peter S. Smith
S. Horace Smith
Sam'l W. Thayer, Jr.
Magloire Turcot
Henry L. Watson
Waldo C. Williams
J. W. Woodburn. 18

HONORARY.

Theophilus Clark
William Bridgman
George W. Darling
1839.

Josiah P. Barber
James C. Briggs
Milo L. Burnham
W. W. Carpenter
John M. Currier
William O. Fisk
James Fulton
Charles B. Holbrook
Joseph Knowles
John W. Miles
Lewis Morrill
James R. Morse
Joseph B. Murray
Cyrus Porter
Edward Vail. 15

HONORARY.

Ptolemy Edson
Timothy J. Gridley
Otis Jenks
Joseph Morrin
1840.

John W. Barney
Asa Bigelow
John C. Bolles
Josiah H. Grenell
Benjamin F. Grosh

Alfred Guillou
Nathan B. Chase
Lewis Clarke
John A. Cummings
Horace Douglass
Adolphe Dugas
Rollin Eaton
Erastus N. Foote
Lenora Foster
Daniel J. Hoyt
Isaac B. Marshall
Lawton C. Slye
James M. Stickney
Hugh Tagert
M. G. J. Tukesbury
Charles M. Tuttle
Wm. W. Van Buren
Jos. E. Warren. 23

HONORARY.

Samuel S. Butler
Caleb N. Butler
Gilman Kimball
Samuel St. John
1841.

Abiathar W. Annis
J. C. Butler
Lathrop R. Charter
Chas. D. Cleveland
Daniel A. Dorman
Jacob G. Elliot
Leland J. Graves
Ch'ncey B. Goodrich
Sylvanus H. Haynes
George A. Hinman
Osman L. Huntley
John Ives
Joseph D. Mansfield
James M. Nye
Joseph H. Streeter
Isaac Tabor, Jr.
Orville Terry 17

Whole number of Alumni, 207
" " of Honorary graduates 16

SECTION VII.

Medical Societies.

The first incorporated medical society in Vermont was organized on the 19th of August, 1784, and consisted of most of the physicians residing in the counties of Bennington and Rutland. The act of incorporation was dated October 25, 1784, and its corporate name, "The First Medical Society in Vermont." The next medical society was formed in Windham county, in 1794, and incorporated on the 21st of October of that year, by the name of "The Second Medical Society in Vermont." On the 5th of February, 1804,

another society was incorporated, in the county of Franklin, denominated "The Third Medical Society in Vermont," and on the 27th of October, 1812, a county medical society was incorporated in the county of Windsor; but no state society was formed till the year 1813.

On the 6th of November of this year, an act was passed, declared, in its preamble, to be for "the improvement of the theory and practice of the different branches of the healing art." This act authorized the physicians in the several counties to form themselves into county societies, conferring upon them, when thus formed, corporate powers. It also established a general society, to be composed of three members from each county society to be chosen by ballot, and declared these, when duly organized by the choice of a president and other officers, to be a corporate body, by the name of "*The Vermont Medical Society*."

Under the provisions of this act, which subsequently experienced some modification, several county societies and a state society were organized. These societies were sustained, for several years, with considerable spirit and ability, and exerted a favorable influence throughout the state, in correcting the evils and elevating the practice and standard of the medical profession. But at length the attention of many of the leading physicians in this state was diverted from the interests of the medical societies to the establishment of schools for medical lectures, in consequence of which the societies languished; and, for several years previous to 1841, the state medical society hardly had a name to live.

This state of things was deeply lamented by many of our first medical men, and through their exertions during the early part of this year, the attention of the medical faculty was pretty extensively awakened to the subject of resuscitating the Vermont Medical Society; in consequence of which, on the 15th of October, 1841, the day of the annual meeting of the society, members from different parts of the state assembled at the state house in Montpelier, and, after partially remodeling their constitution, and giving to the society a more efficient organization, elected the following officers for the ensuing year: John Burnell, *President*; James Spalding, *Vice President*; Z. P. Burnham, *Recording Secretary*; Joseph Perkins, *Corresponding Secretary*; Walter Burnham, *Treasurer*; Edward Lamb, John Fox, H. H. Miles, Seth Cole, Chas. Hall, ——— Redfield, E. Alexander, J. A. Allen, Frederick Story, Melvin Barnes,

BARR SEMINARY.

NORWICH UNIVERSITY.

W. R. Ranney, James Tinker, Noadiah Swift, *Curators*; and one or more *Councillors* in each county. A *Board of Examiners* was also appointed. The annual meeting of the society is to be hereafter held at the state house, in Montpelier, on the Wednesday next following the second Thursday in October, at 10 o'clock in the morning.



Burr Seminary Building.

SECTION VIII.

Burr Seminary.

This institution is in Manchester, and was incorporated October 23, 1829. It owes its existence to the munificence of Joseph Burr, Esq., who resided many years at Manchester, and, by patient industry and an upright course of business, accumulated property estimated, at the time of his death, which took place April 14, 1828, to amount to \$150,000. A large portion of this property was distributed by will to public institutions. The following is a list of the principal legacies:

Am. Board of Foreign Missions,	\$17,000
" Home Missionary Society,	10,000
" Tract Society,	10,000
" Colonization Society,	7,000
" Bible Society,	15,000
Vt Domestic Missionary Society,	5,000
Manchester Congregational Soc.,	5,000
" Literary Seminary,	10,000
Middlebury College,	13,000
Williams College,	1,000
Dartmouth College,	1,000
N. W. branch of Am. Educa. Soc.,	3,000

The \$10,000, mentioned above, for a literary seminary at Manchester, laid the foundation of the *Burr Seminary*. The condition of the above grant was that within the period of five years from the decease of the legator, "suitable build-

ings should be erected, apparatus and other things provided for the furtherance and accomplishment of the object, the expense of which should be at least equal to the further sum of \$10,000."

A board of fifteen trustees was established by the act of incorporation. They held their first meeting Dec. 16, 1829, and proceeded with energy to carry out the benevolent intentions of Mr. Burr. On the 15th of May, 1833, the necessary accommodations having been provided, the school was opened with appropriate public exercises in the chapel of the institution. Addresses were delivered by the Rev. John Proudfit, D. D., president of the board of trustees, and by the Rev. Lyman Coleman, who had been appointed *principal*. With the latter was associated John Aiken, Esq., in the immediate management of the school, and under their direction it soon assumed a high place among the literary institutions of New England. The number of students the first term amounted to 146, of whom a large proportion were professors of religion, and had in view the preparation for the gospel ministry. In consequence of the endowment by Mr. Burr, the tuition of those students, whose circumstances require it, may be remitted to the number of 30. The self-supporting system was adopted in the beginning, with a manual labor department; but it proved here, as it has almost every where else, unsuccessful, and was soon abandoned. The present instructors of the seminary are, the Rev. Joseph D. Wickham, A. M., *Principal*; William A. Burnham, A. M., *Principal of the English Department*, and S. J. M. Merwin, A. B., *Classical Assistant*. Board is furnished by the steward *at cost*, varying with the price of provisions, but averaging about \$1.50 per week. Tuition, to those who are not beneficiaries, from \$3 to \$5 a quarter. The building is of stone, 102 feet long and four stories high including the basement. To the building is attached a kitchen and wood house 70 feet long, and about 30 acres of land, with a valuable house for the *Principal*. Its situation among the Green Mountains is pleasant, retired and healthful, and where there are few temptations to extravagance and vice.

SECTION IX.

*Norwich University.**

In 1820, an institution was established at Norwich, in this state, under the name

* The materials for this section were not received in season, or it would have been inserted next after Middlebury College.

NORWICH UNIVERSITY.

STUDIES.

ADMISSION.—GOVERNMENT.

of the American Literary, Scientific & Military Academy, and a commodious building was erected for its accommodation. It was placed under the superintendence of Capt. Alden Partridge, and continued for a number of years in a very flourishing condition, with pupils, or cadets, from nearly all the states in the Union. Subsequently the principal part of the school was removed, by Capt. Partridge, to Middletown, Connecticut; but it was at length discontinued there, and Capt. P. returned to Norwich, where, in the mean time, a small school had been kept up in the original building at that place. In consequence of the application of those interested in the school at Norwich, an act was passed on the 6th of November, 1834, incorporating an institution by the name of the *Norwich University*, and giving it power to confer "all such diplomas, degrees, honors, or licenses, as are usually conferred by colleges, or universities." The corporation consists of 25 persons besides the president of the University, who is *ex officio* member and president of the board of trustees. The trustees are empowered to fill their own vacancies, are required to provide for a constant course of instruction in military science and civil engineering, and are prohibited from establishing any regulations of a sectarian character, either in religion or politics. The University went into operation under its charter in May, 1835, and held its first commencement in August, 1836.

The plan and principles of this institution are very unlike those of our colleges and universities generally. There is no definite period in which the regular course of studies is to be completed, and consequently there is no general division of the pupils into classes, denoting by years the several stages of the course. Each student is permitted to advance as rapidly as possible in his studies, due regard being had to a thorough understanding of the same, and when he has completed the full course, he is admitted to an examination and to the honors of the institution, if found qualified, without reference to the time he has been pursuing his studies.

Course of Studies. The regular course of instruction in the university embraces the following branches, viz: the Latin, Greek, French, Spanish and English languages, Arithmetic, the construction and use of Logarithms, Algebra, Geometry, Planometry, Stereometry, Trigonometry, Mensuration of heights and distances, application of Algebra to Geometry, Isoperimetry, Conic Sections, Mechanics, Hydrostatics, Hydraulics, Pneumatics, Op-

tics, Electricity, Magnetism, Elements of Chemistry, Astronomy, the use of the Barometer, Surveying, including Leveling, Topographical and Military Drawing, Civil and Military Engineering, Permanent and Field Fortifications, National Defence, Military Tactics, &c., Geography, History, Ethics, Logic, Rhetoric, Natural and Political Law, the Laws of Nations, Mental Philosophy, Political Economy, the Constitution of the United States, Music, Fencing, the theory of Projectiles and its application to Gunnery. These constitute the regular course, but the Latin and Greek languages, though taught to those who wish to study them, are not required for obtaining a diploma.

For the accommodation of students who have not the time or means to complete the full course, the following partial course is adopted, which will well qualify a young man to become an instructor in an English institution, a practical surveyor, or assistant engineer, and for the ordinary practical duties of the citizen and citizen-soldier, viz: the English language, Arithmetic, Logarithms, Algebra, Geometry, Trigonometry, Mensuration of heights and distances, Planometry, Stereometry, Practical Surveying, including Leveling, Topographical and Military Drawing, the Elements of Natural Philosophy and Astronomy, Geography, History, Ethics, Rhetoric, Logic, the Constitution of the United States, and the Science of Government generally, and practical Military Science. The completion of this course does not entitle the student to a diploma, but he may have an honorable discharge and recommendation signed by the president.

Admission. For admission into the university the candidate must be at least twelve years old, of good moral character; must be well versed in the elements of Arithmetic, English Grammar and Geography, and able to write a fair legible hand. Those who have made further advancements on joining the university, are allowed to take the station to which their qualifications entitle them, without any charge for back tuition. None are admitted for a less term than six months; and the pupils, or cadets, are required to dress in the uniform of the institution.

Government. The immediate government of the institution is vested in the president. The discipline is strict, being in principle military, and in practice parental. *Military exercises* are attended to at such hours as not to interfere with the regular studies, but occupy such portions of the time as are generally spent in idleness, or useless amusements, for which

NORWICH UNIVERSITY.

CORPORATION—OFFICERS.

GRADUATES.

they constitute a healthy, rational, and useful substitute. A course of *lectures* on the Constitution of the United States, and the science of government generally, Political Economy, Military Science in its several departments, Geography, &c., is delivered annually by the president.

Commencement and Vacation. The annual commencement is on the Thursday next following the third Wednesday in August; immediately after which there is a vacation of *four weeks*—the only one in the year. A public *examination* is held, commencing on the Monday of the week preceding commencement, and continuing one week.

Advantages. The advantages claimed by the institution over others are,

1st. That, while other seminaries only fit the pupils to enter on the study of some one of the learned professions, this, in addition, fits them, if they see fit, to enter directly upon the discharge of the active duties of life—to become agriculturists, merchants, manufacturers, teachers, surveyors, engineers, or soldiers, as inclination may direct, or circumstances require.

2dly. That, by allowing each student to advance as rapidly as he can, in his studies, consistently with a thorough understanding of the same, much time, and, consequently, much expense, may be saved in completing a course of education.

3dly. That, while a large portion of the students leave other institutions with their constitutions broken down and their health so much impaired as to incapacitate them for future usefulness, those from the Norwich University, in consequence of being inured to regular military and other exercises, go into the world with firm and vigorous constitutions, capable of enduring fatigue and encountering the severest labors.

CATALOGUE

OF THE CORPORATION, OFFICERS AND GRADUATES.

Corporation.

Capt. Alden Partridge,
Hon. Jedediah H. Harris,
His Exc. Silas H. Jenison,
Hon. Caleb Keith,
Hon. William Noble,
Hon. David P. Noyes,
John Wright, Esq.,
Hon. Joshua Stowe,
Isaac N. Cushman, Esq.,
Col. Jonathan P. Miller,
Dr. William Sweatt,
Hon. Hubbard H. Winchester,
Hon. Daniel Cobb,
Rev. John M. Austin,

Hon. Aaron Loveland,
Jabez A. Douglass, Esq.,
Edwin F. Johnson, Esq.,
Dr. Ira Davis,
Hon. Henry C. Denison,
Hon. Truman Chittenden,
Hon. John L. Putnam,
Dr. Lyman Lewis,
Cyrus Partridge, Esq.,
Rev. Cyrus Fay,
John S. Cram, Esq.,
William H. Duncan, Esq.,
John Wright, Esq., *Secretary.*
William Sweatt, *Treasurer.*
Alvin E. Bovee, *Librarian.*

Board of Medical Examiners.

Dr. William Sweatt,
" Ira Davis,
" Eldad Alexander,
" Thomas Winslow.

Executive Committee.

Dr. William Sweatt,
Hon. Aaron Loveland,
Dr. Ira Davis,
John Wright, Esq.

Faculty.

Capt. Alden Partridge, *President,*
and Professor of Natural, Moral and
Intellectual Philosophy, History, Sci-
ence of Government, Political Econ-
omy and Military Science.

David Richardson,
Professor of Mathematics.

H. Villiers Morris,
Professor of Civil Engineering, and
Topographical Drawing: also, As-
istant Military Instructor.

Alvin E. Bovee,
Prof. of Anc. and Mod. Languages.

Stephen N. Warren,
Assistant in Mathematics.

James V. A. Shields,
Assistant in Mathematics.

E. B. Perkins, *Instructor in Music.*

Graduates.

1836.	Henry S. Ranney
Alonzo Jackman.	Aaron L. Balch
HONORARY.	E. L. Lee
A. M.	Benj. Wright, L L D
H. P. Woodworth	M. Robinson, L L D
*Zerah Colburn	1837.
Truman B. Ransom	Cyrus H. Fay
E. L. Brooks	Josiah Swett, Jr.
Edwin F. Johnson	George W. Gilson
Valentine B. Horton	Robert Frazer
J. H. Ward	Joseph W. Curtis
Gideon B. Welles	Horatio G. Gilbert
J. H. Lawrence	Eugene E. McLean
P. Phillips	W. Scott Sherwood

GRADUATES.

PRINTING.

NEWS PAPERS.

S. R. Streeter	Africus S. Howard
Joseph H. Streeter	Samuel Marsh
Robert Frazer *m c e	Asa C. Marvin
Saml B. Grice m c e	Youngs B. Wood
Jos. G. Tilden m d	William Livingston
HONORARY.	James A. Hall
A. M.	Friend P. Fletcher
Nathan M. Knapp	Jonathan Tarbell
Joseph B. Burleigh	Joshua Lincoln
Josiah Sanborn	M. C. E.
Henry W. Cushman	Samuel Nichols, 2d
Joseph D. Allen	Chauncey Wright
1838.	Cyrus B. Burnham
Jay Dyer	Charles Lewis
Jehiel Lillie	1840.
John C. Murray	Thomas D. Fell
Charles D. Lewis	Sylvester M. Hewitt
Johnson Shedd	Lucius Hurlbut
Collins Wight	Edward Crowell
Charles Slack.	Philander Palmer
HONORARY.	Alvin Roundy
J. W. Horr m c e	Joseph Shedd
H. V. Morris m c e	Simeon Wheeler, Jr.
1839.	Daniel Fuller
George B. Adams	Alonzo Jackman A M
Walter A. Hurlbut	Josiah Swett, Jr. A M

Whole number of Alumni 61
" honorary graduates 27

NOTE.—Our materials for the preceding catalogue were mostly derived from the annual catalogue for 1840, and, consequently, we are unable to give the names of the graduates in 1841, although their number is included in the above summary. The times of the appointment and exit of trustees, officers, &c. not ascertained.

SECTION X.

Printing—Periodicals and Books.

The first printing office in Vermont was established at Westminster, in the summer of 1778, by Judah Paddock Spooner and Timothy Green. At the session of the legislature in October following, Judah P. Spooner and Alden Spooner were appointed state printers. The laws which were passed at the two preceding sessions of the legislature had been promulgated only in manuscript. In February, 1781, was commenced, at Westminster, by J. P. Spooner and Timothy Green, the publication of the first newspaper ever printed in Vermont. It was called "*The Vermont Gazette, or Green Mountain Post Boy*," and it had for its motto the following couplet, which is truly characteristic of the inhabitants of the Green Mountain State :

* Master of Civil Engineering.

"Pliant as reeds where streams of freedom glide,
Firm as the hills to stem oppression's tide."
This paper was issued weekly on Monday, upon a sheet of pot size, and was continued till the beginning of the year 1783.
The second newspaper published in Vermont was established at Bennington, by Anthony Haswell and David Russell. It was called "*The Vermont Gazette, or Freeman's Depository*." It was commenced June 5, 1783, and has been continued down to the present time, a period of 59 years. The printing press and types, which had been used at Westminster, having been purchased by George Hough, he removed them to Windsor, and, in partnership with Alden Spooner, on the 7th of August, 1783, commenced the publication of a paper called "*The Vermont Journal, and Universal Advertiser*." This was the third paper established in Vermont, and was continued till about the year 1834. The fourth paper was *The Rutland Herald, or Rutland Courier*. It was established June 25, 1792, by Anthony Haswell, and is still continued. Since that period, a large number of new papers have been established at different times in different sections of the state, but many of them have been of very short continuance. The number of weekly papers published in Vermont is at present about 30. Of these, three are religious papers, and one, "*The Voice of Freedom*," is devoted to the subject of the abolition of slavery. The religious papers are, "*The Vermont Chronicle*," which is the organ of the Congregationalists, "*The Vermont Telegraph*," the organ of the Baptists, and "*The Universalist Watchman*," which is the organ of that denomination. We have taken much pains to ascertain the names, dates, &c., of the periodicals which have been, or are now, published in this state, but with very imperfect success. In addition to those named in the succeeding table, the following, and many others, probably, have been published in the state, of which we know little but their names: *Freemen's Press*, by Derick Sibley, Montpelier; *Vt. Mercury*, Rutland; *Northern Spectator*, Poultney; *St. Albans' Adviser*; *Green Mountain Palladium*, Chester; *Workingman's Gazette*, by Haskell & Palmer, Woodstock; *Spirit of the Times*, by Wm. L. Garrison, Bennington; *Luminary*, Randolph; *National Standard*, by Wm. Slade, Middlebury; *American*, Middlebury; *State Jour.* Montpelier; *Repertory*, by J. Spooner, St. Albans; *Citizen Soldier*, Norwich; *Canadian Patriot*, Derby. Several small temperance, agricultural, and medical papers have been issued for a short time.

News Papers.	Location	Founders.	Commenced.	Ended.
Vermont Gazette	Westminister	Spooner & Green	Feb. 1781	1783
Vermont Gazette	Bennington	Haswell & Russel	Jun. 1783	contin'd
Vermont Journal	Windsor	Hough & Spooner	Aug 1783	
Rutland Herald, or Courier	Rutland	Anthony Haswell	Jun. 1792	contin'd
Farmer's Library	Fair Haven	Mathew Lyon	1793	3 or 4 yrs
Federal Galaxy	Brattleboro'	Benjamin Smead	Jan. 1797	
Burlington Mercury	Burlington	Donnelly & Hill	1797	1799
Tablet of the Times	Bennington	Merrill & Langdon	Jan. 1797	
Green Mountain Patriot	Peacham	Farley & Goss	Feb. 1798	Mar 1807
Vergennes Gazette	Vergennes	Samuel Chipman	Aug 1798	
Weekly Wanderer	Randolph	Sereno Wright	Jan. 1801	1811
Northern Sentinel	Burlington	J. H. Baker	Mar 1801	contin'd
Middlebury Mercury	Middlebury	Huntington & Fitch	Dec. 1801	Jan 1810
Vermont Gazette	Windsor	Nahum Mower	Mar 1801	
Reporter	Brattleboro'	Wm. Fessenden	Feb. 1803	
Northern Memento	Woodstock	Isaiah Carpenter	May 1805	Feb 1806
Post Boy	Windsor	Naham Mower	Jan 1805	Jan 1808
Vermont Precursor	Montpelier	Clark Brown	Nov 1806	Sep 1807
Vermont Watchman	Montpelier	Samuel Goss	Sep 1807	contin'd
North Star	Danville	Ebenezer Eaton	Jan 1807	contin'd
Vermont Courier	Rutland	Thos. M. Pomeroy	July 1808	May 1810
Vermont Republican	Windsor	Farnsw'th & Churc'l	Jan 1809	1834
Champlain Reporter	St. Albans	Morton & Willard	Apr 1809	
The Washingtonian	Windsor	Josiah Dunham	July 1810	4 or 5 yrs
Burlington Gazette	Burlington	Hinckley & Fish	Sep 1814	Feb 1817
Vermont Mirror	Middlebury	Samuel Swift	Sep 1812	Sep-1816
Bellows Falls Intelligencer	Belows Falls	T. G. Fessenden	Jan 1817	
Woodstock Observer	Woodstock	David Watson	Jan 1820	1833
Repertory	Burlington	Jeduthan Spooner		
Vermont Patriot	Montpelier	George W. Hill	Jan 1826	contin'd
Vermont Chronicle*	Bellows Falls	E. C. Tracy	Apr 1826	contin'd
Burlington Free Press	Burlington	H. B. Stacy	June 1827	contin'd
Vermont Advocate†	Royalton	Wyman Spooner		
Poultney Gazette	Poultney	Shute & Smith		
Vermont Telegraph	Brandon	Orson S. Murray	1829	contin'd
Horn of the Green Mtns.	Manchester	Edward C. Purdy	1830	
American Whig	Woodstock	Hemingway & Sher-	1829	
Universalist Watchman‡	Woodstock	Wm. Bell [win	1829	contin'd
Farmer's Herald	St. Johnsbury	Luther Jewett	July 1828	
The Vermont Courier	Woodstock	B. F. Kendell	Sep 1830	1837
The Vermont Enquirer	Norwich	Davis & Porter	Mar 1829	1831
Argus	Middlebury	C. C. Waller	Oct 1831	contin'd
Weekly Messenger	St. Johnsbury	Samuel Eaton	July 1832	Oct 1833
Windsor Statesman	Windsor	Tolford & Fletcher	Jan 1833	1840
Green Mountain Boy	Burlington	Richards & Co.	Dec 1834	Mar 1835
The Spirit of Seventy-Six	Windsor	Darius Jones	Oct 1835	1837
Vermont Intelligencer	Bellows Falls	B. G. Cook	Jan 1835	
The People's Press	Middlebury	E. Maxham	Apr 1836	contin'd
The Vermont Mercury	Woodstock	Haskell & Palmer	Apr 1837	contin'd
Franklin Republican	Sheldon	J. W. Tuttle	1837	1839
Vergennes Vermonter	Vergennes	R. W. Griswold	Jan 1838	contin'd
The Caledonian	St. Johnsbury	A. G. Chadwick	July 1837	contin'd
Tuesday News	Chelsea	W. Hewes	1837	contin'd
Vermont Statesman	Castleton	Ovid Miner	J'ly 1838	contin'd
Franklin Messenger	St. Albans	E. B. Whiting	Jan 1838	contin'd
Vermont Republican	St. Albans	C. G. Eldridge	Jan 1840	contin'd
Windham Co. Democrat	Brattleboro'	G. W. Nichols	Nov 1836	contin'd
Brattleboro Phoenix	Brattleboro'	W. E. Ryther	Aug 1834	contin'd
Bellows Falls Gazette	Bellows Falls	John W. Moore	1838	contin'd
North American	Swanton	H. J. Thomas	Apr 1839	2 years
Vermont State Paper	Johnson	C. G. Eastman	1838	1840
Vermont Times	Windsor	C. H. Severance	June 1839	May 1841
The Voice of Freedom	Montpelier	Chauncy L. Knapp	Jan 1839	Jan 1842
The Spirit of the Age	Woodstock	C. G. Eastman	May 1840	contin'd
Lamoille Whig	Johnson	Joseph Poland	June 1840	contin'd
State Banner	Bennington	E. Davis	Mar 1841	contin'd

* Removed to Windsor in Oct. 1826.

† Removed to Chelsea.

‡ Removed to Montpelier.

ORIGINAL VERMONT BOOKS.

WHEN AND WHERE PRINTED.

Books.—The greater part of the books issued from the press in Vermont have been reprints of works first published elsewhere, and some of these reflect high credit upon the Vermont editors and publishers. The principal original works are embraced in the following table.

NAME, OR TITLE.	AUTHOR.	WHERE PRINTED.	Form	Page	Year
Proceedings of New York, [Pam.]	Ethan Allen,				1774
Animadversary Address, [P.]	Ethan Allen,	Hartford, Con.	8	24	1778
Vindication of Vermont, [P.]	Ethan Allen,	Windsor,	12	172	1779
Vermont's appeal, [P.]	S. R. Bradley,	Hartford, Con.	8	52	1779
Principles of Government,	Nathl. Chapman,	Rutland,	12	192	1793
Narrative of Captivity,	Ethan Allen,				1779
Oracle of Reason,	Ethan Allen,	Bennington,	8	477	1784
Natural and Civil History of Vt.	Samuel Williams,	Walpole, N. H.	8	416	1794
Letters upon Vermont,	J. A. Graham,	London,	8	187	1697
History of Vermont,	Ira Allen,	London,	8		1798
Algerine Captive, 2 vols.	Royal Tyler,	Walpole, N. H.	12	428	1797
Nat. & Civil History of Vt. 2 vls.	Samuel Williams,	Burlington,		1003	1809
Digested Index, of Reports 3 vls.	Nicholas Baylies,	Montpelier,	8	1512	1814
Epidemics of Vermont,	Joseph A. Gallup,		8		1815
Spelling Book,	Seth Leonard,	Rutland,	12	228	1816
Truth Displayed,	Benjamin Osburn,	Rutland,	8	726	1816
Fall of Palmyra, (Poem)	N. H. Wright,	Middlebury,	24	143	1817
On Free Agency,	Nicholas Baylies,	Montpelier,	12	216	1820
Harmon's Journal,	Dan. W. Harmon,	Andover, Mass.	8	432	1820
Essay on Contracts,	Daniel Chipman,	Middlebury,	8	224	1822
The Etherial Director,	U. C. Burnap,	Middlebury,	8	72	1822
The Primary Instructor, Sp. Book.	Jasper Hazen,	Woodstock,	18	160	1822
System of Arithmetic,	Beriah Stevens,	Saratoga, N. Y.	8	423	1822
Vermont State Papers,	Wm. Slade,	Middlebury,	8	568	1823
Gazetteer of Vermont,	Z. Thompson,	Montpelier,	12	312	1824
Botanist and Family Physician,	Silas Gaskill,	Danville,	12	203	1824
Missionary Gazetteer,	Walter Chapin,	Woodstock,	12	420	1825
The Christian Instructor,	Josiah Hopkins,	Middlebury,	12	312	1825
Essays, Metaphysical,	Asa Burton,	Portland,	8	414	1824
Remarkable events,	Leonard Deming,	Middlebury,	12	324	1825
The Youth's Asst. (Arithmetic)	Z. Thompson,	Woodstock,	8	160	1825
English Grammar,	Rufus Nutting,	Montpelier,	12	136	1826
Christian Instructor Instructed,	Noah Levings,	Middlebury,	12	237	1827
Hudson's Letters,	Charles Hudson,	Woodstock,	12	327	1827
Youth's Assistant,	Z. Thompson,	Woodstock,	12	266	1828
Greek Lex'n of New Testament,	Sam'l C. Loveland	Woodstock,	24		1828
Spelling-Book,	Jonathan Lamb,	Burlington,	12	180	1829
History of Vermont,	F. S. Eastman,	Brattleboro',	18	110	1829
History of Vermont,	Nathan Hoskins,	Vergennes,	12	316	1831
The Silent Harp, (Poems)	Elizabeth Allen,	Burlington,	12	120	1832
History of Vermont,	Z. Thompson,	Burlington,	18	252	1833
Christianity Vindicated,	John H. Hopkins,	Burlington,	12	178	1833
Principles of Government,	Nathl. Chipman,	Burlington,	8	330	1833
Primitive Creed,	John H. Hopkins,	Burlington,	12	415	1834
Banks and Usury,	J. O'Callaghan,	Burlington,	12	300	1835
May Martin,	D. P. Thompson,	Montpelier,	24		1835
Practical Forms,	Asa Aikens,	Windsor,	12	448	1836
Primitive Church,	John H. Hopkins,	Burlington,	12	392	1836
Gothic Architecture,	John H. Hopkins,	Burlington,	4	46	1836
Church of Rome,	John H. Hopkins,	Burlington,	12	406	1837
Protestancy and Matrimony,	J. O'Callaghan,	Burlington,	12	328	1837
Icelandic Grammar,	Geo. P. Marsh,	Burlington,	12	188	1838
Universalism,	Andrew Royce,	Windsor,	18	207	1839
Institutes of Medicine, 2 vols.	Joseph A. Gallup,	Boston,	8	886	1839
The Green Mountain Boys, 2 vols.	D. P. Thompson,	Montpelier,	12	536	1839
The Gift, (Poems)	Sophia Watrous,	Montpelier,	24	172	1840

CHARACTER OF BOOKS.

MAGAZINES.

Of the theological and metaphysical works in the above list, we shall express no opinion. Each person will doubtless try them by the standard of his own views and creed, and his judgment will be fashioned accordingly. The work of Dr. Burton is, however, thought by many to evince considerable acumen and depth of thought. Of the political writings of Ethan Allen we have already spoken. They served their purpose and have passed away. Dr. William's History of Vermont, though diffuse in style and embracing much foreign matter, will long continue our standard work. Graham's work upon Vermont has very little to recommend it, excepting the excellent paper and fair type upon which it is printed. It contains few facts worth remembering. Ira Allen, being himself an actor in most of the affairs which he narrates, has infused into his history much of the spirit of the times of which he wrote, but as he wrote principally from memory there is some confusion in the order of events. Mr. Slade's Vermont State Papers is an invaluable repository of our documentary history. Judge Chipman's work on the principles of government will be read and admired for its sound views long after its venerable author has gone down to the grave, upon the confines of which he is now lingering at the age of 90 years. The work on contracts, by Daniel Chipman, is regarded as a standard authority. Dr. Gallup's work on Epidemics embraces many interesting and valuable facts, and many sound and judicious observations, and, together with his recent and more elaborate work, The Institutes of Medicine, is calculated long to sustain his high reputation as a practitioner and lecturer. The Missionary Gazetteer, by Mr. Chapin, was a valuable work of much research and labor—poorly requited. Leonard's huge Spelling Book, and Stevens' more huge Arithmetic—still standing on the shelves of our old bookstores—monuments of folly. Of the other school books in the above list, their limited use speaks not very highly,—no sure criterion, however, of their merits; for we have long since learned that the popularity of school books depends rather upon the caprice of teachers and the puffing and energy of booksellers than upon their intrinsic merits.

In poets and writers of fiction, Vermont has not been prolific. The Silent Harp and the Gift contain some very good articles, but, were it otherwise, compassion for the fair, but afflicted, writers, would create a local interest in their works. Many fugitive pieces of poetry of considerable merit have originated in Vermont.

The author of the Algerine Captive seems to have been our pioneer in the field of fiction, in which our respected namesake, the author of the Green Mountain Boys, has at present no competitor. The work last mentioned is one of much interest, and, in general, exhibits a fair view of the characters and the period to which it relates.

Magazines. Attempts have been made at various times to establish and sustain monthly and semi-monthly magazines, devoted to literary, scientific, religious and miscellaneous subjects, but these have, generally, been attended with little success. The earliest work of this kind, of which we have any particular knowledge, was the Rural Magazine, or Vermont Repository, published at Rutland, in monthly numbers of 56 pages each, during the years 1795 and 1796. It was edited by Dr. Samuel Williams, and contains, besides other interesting matters, a valuable collection of documents relating to the early history of this state. The numbers form two octavo volumes of 650 pages each, but entire copies of it are now seldom met with. The next magazine of any consequence was the Adviser, published at Middlebury, under the direction of the convention of the Congregational churches. It was commenced in January, 1809, was published in monthly numbers of 32 pages each, and was continued seven years. It contains much valuable matter, particularly, in relation to the Congregational church in this state. The Repository was published at Middlebury, by an association of gentlemen. It was devoted to literary and scientific subjects, was commenced in 1812, and numbers issued occasionally till 1817. The Christian Repository was published at Woodstock, by the Rev. Samuel C. Loveland, and was devoted to the support of the doctrines of Universalism. It was issued in monthly numbers of duodecimo form, was commenced in the year 1820, and was continued several years. The Episcopal Register, a monthly periodical, devoted to the support of the doctrines of the Episcopal church, was commenced at Middlebury, in January, 1826, and continued four years. The Mother's and Ladies' Book was commenced at Chelsea in 1839, and is still continued. It is edited by Miss Sophia A. Hewes. Besides these, a magazine called the Iris was published at Burlington, by Mr. Guy C. Worth, in 1828 and part of 1829, and the Green Mountain Repository, edited by the Author, was published at the same place during the year 1832. Several oth-

VERMONT REGISTERS.

ESTABLISHED RELIGION.

ers, equally ephemeral, have from time to time sprung up in different places.

Vermont Registers. There were several successive annual political Registers published at Rutland previous to the year 1800, but the earliest series which was continued any considerable length of time was commenced at Middlebury, in 1803, by Huntington & Fitch, and was continued about 12 years. The next series of Vermont Registers was commenced

at Burlington, in 1810, by Samuel Mills, and was published annually till 1824. In 1818, a Register and Almanac was commenced at Montpelier, which has been published annually, and which is still continued. These series of Registers embrace a large amount of political and other facts, and are highly worthy of a place in our public libraries, as works of reference, but we are not aware that complete series of them are any where to be found.

CHAPTER IX.

RELIGION AND RELIGIOUS INSTITUTIONS.

SECTION I.

Religion of the State.

Although we have in the United States no religious establishment, we certainly have an established religion, and that religion is Christianity. The existence of Christianity, and its binding force, as the religion of the land, over the consciences and conduct of the people, is recognized by the constitutions and laws of nearly, or quite all of the states in the Union, and they all recognize the Old and New Testament scriptures as containing the doctrines and precepts of this religion. But here they stop. They do not attempt to define the doctrines which these scriptures inculcate, or to give preference to any one of the various sects into which Christians are divided. Having established the Bible as the religious charter, individuals are left to interpret it according to the dictates of their own judgments and consciences, provided they do not disturb or interfere with the rights and privileges of others.

In the constitution of Vermont, and in the subsequent acts of the legislature, Christianity is very clearly recognized as the religion of the state. In the third article of the declaration of rights it is declared, "that all men have a natural and unalienable right to worship Almighty God according to the dictates of their own consciences and understandings, as in their opinion shall be regulated by the word of God." Here the word of God, or the Bible, is plainly recognized as the

basis of religious opinion and worship. And while the article goes on to declare that no man ought to be compelled to attend, erect, or support any place of worship contrary to the dictates of his conscience, it is plainly implied that his conscience is to be enlightened and guided by the Bible. It speaks of the various denominations of Christians as constituting the whole community, and enjoins upon all the observance of the Christian Sabbath and the keeping up of such sort of religious worship as "to them shall seem most agreeable to the *revealed will of God.*"

At the first session of the general assembly in 1778, a resolution to observe the Lord's Day as the Sabbath, was among the first adopted by that body, and in our first printed code of laws, enacted in 1779, is a law enforcing the observance of the Christian Sabbath and for preventing the disturbance of religious worship. And shortly afterwards an act was passed, entitled "an act for supporting ministers of the gospel," based, as was declared in the preamble, on the "importance to the community, as well as to individuals, that the precepts of *Christianity* be publicly, and at stated times, inculcated on the minds of the inhabitants."

But while Christianity is plainly recognized as the religion of the state, and while the moral precepts of the Bible are the acknowledged basis of our legislative enactments, and while some kind of religious worship, *regulated by the word of God*, is enjoined upon all, government

RELIGIOUS DENOMINATIONS.

CONGREGATIONAL CHURCHES.

has wisely left the particular modes of worship and the internal regulations of churches to the judgments and consciences of individuals, provided they do not interfere with the rights of others, or corrupt the morals and good order of society.

In the grants of townships in this state, made by the provincial government of New Hampshire, three rights were reserved for the support and propagation of Christianity, one as a glebe for a minister of the church of England, one for the society for propagating the gospel, and one for the first settled minister. A right for the first settled minister was also reserved in the Vermont grants.

An account of the principal religious denominations in this state will be found in the following sections of this chapter.



SECTION II.

Congregational Churches in Vermont.

BY REV. THOMAS A. MERRILL, D. D.*

The first congregational church in Vermont was organized at Bennington, December 3d, 1762,* by the union of two

small churches, the members of which had removed to that place from Hardwick and Sunderland, in Massachusetts. This church, on the 24th of May, 1763, gave "a call" to the Rev. Jedediah Dewey, pastor of a church in Westfield, Massachusetts, and appointed a committee to confer with him and his church, and to make all needed arrangements and stipulations. The result was, the church in Westfield of which Mr. Dewey was pastor, united with the church in Bennington, August 14, 1763, and under the sanction of a council of two pastors and two "messengers," which met at Westfield the same day, Mr. Dewey became pastor of the new or united church. The union was doubtless formed with the understanding, that the members, who had constituted the Westfield church, were about to remove to Bennington. The present churches in the three towns in Massachusetts from which came the three churches that originally constituted the church in Bennington, all date their organization previous to 1762. It is therefore highly probable, if not certain, especially in view of oral and other testimony, that the three churches, which originally constituted the first church in Vermont, were composed of persons, who in those days were denominated separatists. The separatists disapproved of the authority which the laws then gave the civil magistrates over ecclesiastical concerns, and which was sanctioned by the Cambridge platform. The church in Bennington at its organization made the following record: "It is agreed upon and voted by the church in Bennington, that they make an exception in the fourth paragraph in the eleventh chapter in the Cambridge platform in respect to using the civil power to support the gospel; and also the ninth paragraph in the seventeenth chapter in respect to the civil magistrate's coercive force." Few if any other churches in Vermont ever made any reference, at the time of their organization, either to the Cambridge or Saybrook platform. They were substantially independent, though acknowledging the necessity of councils in ordinations and the utility of them in cases of difficulty; for Vermont was not settled till the era of lay ordinations among congregationalists in New England had passed away. The churches very universally, except in some cases of great disorder,

* Kindly furnished in behalf of the General Convention of the Congregational churches in Vermont, to which body application was made for the same.

* The materials of the following brief sketch of congregationalism in Vermont are derived almost wholly from original records. The statements, therefore, are supposed to be as correct as the nature of the case will admit.—T. A. Merrill.

CONGREGATIONAL CHURCHES.

ASSOCIATIONS AND CONSOCIATIONS.

held each other in fellowship, and acknowledged a kind of undefined responsibility to each other.

The church in Newbury originally composed of members living on both sides of Connecticut river, was organized in the "fall of 1764." Having given Mr. Peter Powers an invitation to settle, they voted, that the council should "meet for said installment down country, where it is thought best." "Mr. Powers was installed at Hollis, (N. H.) February 27, 1765, over the church in Newbury," and preached his own installation sermon.

The church in Thetford was the only one in Vermont, so far as can be ascertained, which was organized on the principles of the "half way covenant." During the short ministry of Mr. Sumner, persons were "admitted to own the covenant and put themselves under the watch and care of the church" without coming to the sacrament of the Lord's supper. Respecting Mr. S. Dr. Burton, his successor observes: "in the time of the revolutionary war, he being a warm tory soon found the times too warm for him, and secretly absconded."

The following is supposed to be a complete list of the congregational churches, that were organized in Vermont previous to the revolution in 1776:

Bennington,	1762
Newbury,	1764
Westminster,	1767
Windsor, about	1768
Norwich,	1770
Brattleborough, about	1770
Guilford, about	1770
Rockingham, about	1770
Thetford,	1773
West Rutland,	1773
Newfane,	1774
Putney,	1776
Marlborough,	1776

While New York was exercising jurisdiction over the south part of Vermont, a ministerial association was formed, October, 1775, in what is now denominated Windham county, and was composed of the Rev. Messrs. Abner Reeve of Brattleborough, Hezekiah Taylor of Newfane, Joseph Bullen of Westminster, and Samuel Whiting of Rockingham. Their preamble begins, "we the subscribers, ministers of the gospel in the county of Cumberland and state of New York," &c. "think it expedient and our duty to associate and unite in an ecclesiastical body." They retained the name of Cumberland till June 2, 1785. No other association appears to have been formed for 13 years.

The following ministers were ordained or installed before the revolution:—Jede-

diah Dewey, Bennington, August 14, 1763; Peter Powers, Newbury, February 27, 1765; Jesse Goodell, East Westminster, June 11, 1667; James Wellman, Windsor, September 29, 1768; Abner Reeve, Brattleborough, 1770; Ebenezer Gurley, Guilford, 1770; Samuel Whiting, Rockingham, October 27, 1773; Joseph Bullen, East Westminster, July 6, 1774; Hezekiah Taylor, Newfane, August 1774; Benajah Roots, West Rutland, October 1774; Clement Sumner, Thetford, 1775; Lyman Potter, Norwich, August 31, 1775.

The associations consist of ministers, who meet for mutual improvement. While they aim in various ways to promote the interests of the church, and have of course a constitution or a few bye-laws, they neither exercise nor claim any ecclesiastical authority. By common consent the licensing of candidates for the ministry devolves on them, though in some instances this is done by the consociations.

Associations of congregational ministers in Vermont: Windham, formerly Cumberland, October 17, 1775; Rutland, probably, 1788; Royalton, February 1, 1791; Orange, probably, 1798; Addison from Rutland, June 13, 1804; Northwestern from Addison, June 15, 1808; Caledonia from Orange, January 9, 1811; Pawlet from Rutland, September 25, 1811; Windsor, October 1822; Orleans, June 17, 1823; Montpelier from Royalton, October 11, 1826; Black River, afterwards Chester, November 6, 1827; Lancaster from Caledonia, August 13, 1833.

Most of the congregational churches in the western counties, including Lamoille, are united in consociations, with constitutions that much resemble each other and those in Connecticut, which were doubtless their prototype. In some of their constitutions, it is stated that as "great advantages may be derived from visible fellowship and union among churches of similar sentiments respecting the great doctrines of the christian religion and the government and regulation of churches, where their local situation will admit," they propose "to unite and walk together in all acts of visible fellowship and union, mutually watching over and assisting each other as sister churches." These consociations generally consist of the pastor and a delegate from each church, or two delegates where there is no pastor, and meet annually to hear reports on the state of religion; to recommend measures to promote the interests of the churches; to give counsel on practical questions when requested; and to add impulse to the benevolent operations of the denomination. Most of these consociations,

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perhaps all of them, have stipulated in their constitutions, that, when a labor is prosecuted against a pastor or brother, a mutual council shall be granted by the church, if requested by the respondent, before proceeding to final action. They generally require that a majority of every council shall belong to the consociation in which it is called. There was originally but one consociation on the west side of the Green Mountains. This has been divided and subdivided as the churches have become more numerous till the number amounts to five. Their bounds in some instances are county lines.

The following is a list of such consociations, with the time of their organization: Rutland, including Bennington county, January 6, 1797; Addison from Rutland, June 13, 1804; Northwestern from Addison, June 14, 1808; Chittenden from Northwestern, July 4, 1828; Lamoille, October 27, 1840. A consociation was formed in Windham county, October 3, 1797, which has never been connected with those above mentioned.

In several counties, in which are no consociations, county conferences are organized, which possess some of the features of consociations, and become to a considerable extent a bond of union among the churches. At their annual meetings, like the consociations, they report on the state of religion and endeavor to give a spring to the operations of benevolence.

Organization of county conferences: Orange, October 5, 1830; Caledonia, October 23, 1834; Windsor, September 17, 1840; Washington, November 29, 1837.

Previous to 1795, three ministerial associations had been formed. But there was no bond of union between them. Nor was there any organized body to consult for the general interests of the churches now extensively scattered through the state. An overture was made by the Royalton association to the other two bodies, which resulted, as the following extracts will shew:

"At a meeting of delegates from the several bodies of ministers in the state of Vermont convened by circular letters, at the house of president John Wheelock, August 27, 1795, were present Rev. Messrs. Job Swift, Samuel Whiting, Lyman Potter, Asa Burton and Martin Tullar. Mr. Whiting was chosen moderator, and Mr. Tullar scribe. It was unanimously agreed that there be in future a general convention of ministers in the state of Vermont, and that all associations and presbyteries composed of ministers regularly introduced shall be allowed to send two delegates to said convention; and in any coun-

ty in the state, where there shall not be more than one regular minister, he shall for the present be entitled to a seat in the convention. It was declared the general object and design of the convention to consult union and friendship among ministers, and the general interest and well being of the churches. They agreed that the first meeting of said convention shall be on the third Tuesday of June next, at evening, at the house of Mr. Whiting of Rockingham, and that the preacher be appointed by the Royalton association."

The first meeting was held in 1796 as proposed, and a leading object of the convention appears to have been the union of the churches in consociations, and of the ministers in associations. Their advice was generally followed, except as it respected the churches on the east side of the mountain and north of Windham county. These have never been consociated. Within ten years, however, most of them have become united in county conferences, which secure most of the advantages, and, in their estimation, doubtless all the advantages of consociations. Before the organization of the convention, some churches suffered extremely by the labors of ministers, who had come into the state because they had been repudiated elsewhere. The convention at an early period appointed a committee to certify the regular standing of ministers coming into this state or going from it. They thus, over all the churches that would take the trouble to inquire, cast the 'egis of protection.'

Though the convention never claimed any ecclesiastical authority, from time to time they devised means or recommended measures to awaken an interest or promote the welfare of the churches. In 1807, they commenced acting as a missionary society. This society, afterwards modified, but always called the Vermont missionary society, depended for funds on the voluntary contributions of the churches, and continued to aid the destitute portions of the state, till 1818, when its operations were suspended to give place to the Vermont juvenile missionary, now the Vermont domestic missionary society, of which the convention are now *ex officio* members. This society annually appoint a board of directors, who receive the voluntary offerings of the community to the amount of about two or three thousand dollars annually. This sum is expended in grants generally of from fifty to one hundred dollars, appropriated to aid the feeble churches.

The convention in 1808 secured the organization of a tract society, which print-

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SOCIETIES AND PERIODICALS.

ed and circulated tracts for several years, and till it was found more advantageous to procure them from the large establishments in the cities. In 1810, the *Advertiser, or Vermont Evangelical Magazine*, a monthly periodical of 32 octavo pages, was commenced by editors appointed by the convention. This work was generally patronized by the churches, and during the seven years of its continuance, it exerted a most salutary influence.* The convention from time to time has called the attention of the churches and the community to many subjects of deep interest. As early as 1811, they raised a warning voice against intemperance. They have, indeed, repeatedly warned the community against this and other national sins, such as sabbath breaking, including sabbath mails, slavery, profanity, licentiousness, the war spirit, &c. and have often commended with much zeal the various benevolent objects of the day. In regard to some of the leading objects of benevolence, they have (for the purpose of preventing one object from interfering with another) recommended to the congregational churches specific times to take collections or contributions, as is exhibited in the following table :

RELIGIOUS CHARITIES. The months designated for the several objects in the different counties are—											
County.	Jan.	Feb.	March.	June.	May.	Aug.	July.	Oct.	Sept.	Dec.	Nov.
Windham,	Bible	Bible	F. Miss.	H. Miss.	H. Miss.	Ed.	Ed.	Tr. Soc.	S. F. &c.	S. F. &c.	S. F. &c.
Windsor,	Bible	Bible	F. Miss.	H. Miss.	H. Miss.	Ed.	Ed.	Tr. Soc.	S. F. &c.	S. F. &c.	S. F. &c.
Orange,	S. F. &c.	S. F. &c.	Bible	F. Miss.	F. Miss.	H. Miss.	H. Miss.	Ed.	Ed.	Tr. Soc.	Tracts
Washington,	S. F. &c.	S. F. &c.	Bible	F. Miss.	F. Miss.	H. Miss.	H. Miss.	Ed.	Ed.	Tr. Soc.	Tracts
Bennington,	Tracts	Tracts	S. F. &c.	Bible	Bible	F. Miss.	F. Miss.	H. Miss.	H. Miss.	Ed.	Ed.
Rutland,	Tracts	Tracts	S. F. &c.	Bible	Bible	F. Miss.	F. Miss.	H. Miss.	H. Miss.	Ed.	Ed.
Addison,	Ed.	Ed.	Tracts	S. F. &c.	S. F. &c.	Bible	Bible	F. Miss.	F. Miss.	H. Miss.	H. Miss.
Chittenden,	Ed.	Ed.	Tracts	S. F. &c.	S. F. &c.	Bible	Bible	F. Miss.	F. Miss.	H. Miss.	H. Miss.
Grand Isle,	H. Miss.	H. Miss.	Ed.	Tracts	Tracts	S. F. &c.	S. F. &c.	Bible	Bible	F. Miss.	F. Miss.
Franklin,	H. Miss.	H. Miss.	Ed.	Tracts	Tracts	S. F. &c.	S. F. &c.	Bible	Bible	F. Miss.	F. Miss.
Lamoille,	H. Miss.	H. Miss.	Ed.	Tracts	Tracts	S. F. &c.	S. F. &c.	Bible	Bible	F. Miss.	F. Miss.
Orleans,	F. Miss.	F. Miss.	H. Miss.	Ed.	Ed.	Tracts	Tracts	S. F. &c.	S. F. &c.	Bible	Bible
Caledonia,	F. Miss.	F. Miss.	H. Miss.	Ed.	Ed.	Tracts	Tracts	S. F. &c.	S. F. &c.	Bible	Bible
Essex,	F. Miss.	F. Miss.	H. Miss.	Ed.	Ed.	Tracts	Tracts	S. F. &c.	S. F. &c.	Bible	Bible

* Copies of this work may be found in the libraries of the colleges existing in this state at the time of its discontinuance.—T. A. Merrill.

It will be perceived that beside assigning two months for the appropriation of charities to each of the five leading objects of benevolence sustained by the denomination, viz. the cause of the bible, foreign and domestic missions, education and tracts, the convention assign two months to the cause of the seaman's friend society and such other objects as any congregation may wish to patronize. The cause of the education society, though overlooked by many, has taken deep hold of some minds in Vermont. Probably this state may claim the honor of having instituted the first society in the country, which was organized to educate pious and indigent young men for the ministry. As early as 1804, a society was constituted for this purpose, in the western part of the state, and continued to dispense its blessings till after the organization of the American education society. The Vermont, or "northern branch of the American education society," was organized February 2, 1820.

In 1825, the convention took measures to establish a religious paper. They conceived that it was very much needed; that the congregational interest could easily sustain a local paper; that by this means an opportunity would be afforded for individuals to communicate their views and for ecclesiastical bodies and other societies or conventions to publish their proceedings; that individuality and energy would be given to the action of the state; and that the cause of religion and the active operations of benevolence would be greatly promoted. A committee consisting of W. Chapin, T. A. Merrill and C. Walker was appointed to carry the plan of the convention into effect. The committee shortly after made an arrangement with Mr. E. C. Tracy, (who after an absence again returned to the editorial chair,) to commence the publication of the *Chronicle*, in January, 1826. It was first printed at Bellows Falls and afterwards at Windsor. Though the establishment was always private property, and, as it respected other denominations has been truly catholic, yet it has looked to congregationalists for patronage and has derived from them its chief support to this present time.

The general convention consisted originally of delegates from associations only. The members were of course all ordained ministers. The constitution, however, has been repeatedly altered. The following at present are the leading articles :

"ARTICLE 1. The principal objects of the general convention of congregational ministers and churches in Vermont shall

CONVENTION OF THE CONGREGATIONAL CHURCHES. METHODIST EPISCOPAL CHURCH.

be to promote brotherly intercourse and harmony; to yield mutual assistance and excite in each other the spirit of christian fervor; to learn the state, and recommend measures for the welfare of the churches; to obtain religious information respecting the christian church in this country and throughout the world; and to co-operate with other similar institutions in building up the cause of the great Redeemer.

"ART. 2. The general convention receive as articles of faith the doctrines of christianity as they are generally expressed in the assembly's shorter catechism. These doctrines are understood by us to be those, which from the beginning have been generally embraced by the Congregational and Presbyterian churches in New England and especially in Vermont.

"ART. 3. Every association, county conference, or consociation in Vermont, or partly in Vermont, which receives the doctrines above specified as the christian faith, is entitled to send two delegates to the convention; and each association consisting of eight or more ordained ministers may send three members: But no county or district shall ever be represented by both a consociation and a conference."

The annual meeting of the convention is held on "the second Tuesday in September, at 2 o'clock, P. M."

The convention are in correspondence with several ecclesiastical bodies. Except in the case of the general assembly, with whom one delegate is exchanged, who may debate and not vote, the convention send and receive two delegates annually, who are entitled to all the privileges of members. "The corresponding bodies were first represented in the convention as follows: General Association of Connecticut, 1801; General Assembly of the Presbyterian church, 1805; General Association of Massachusetts, 1811; General Association of N. Hampshire, 1811; General Conference of Maine, 1829; Evangelical Consociation of Rhode Island, 1823; General Association of New York, 1838. The convention, in 1833, acceded to an overture from the Congregational Union of England and Wales, and established a friendly correspondence. But hitherto it has not been convenient for either body to send a delegation to the other.

The anniversaries of some of the societies patronised by the convention are held in connexion with the annual meeting of the convention. The following is ordinarily the course of the public exercises: Tuesday, 2 o'clock, P. M., convention sermon; in the evening, report of the Sabbath School Union with addresses; Wednesday, 2 o'clock, P. M., narratives

of the state of religion; evening, reports of the Education Society with addresses; Thursday, half past 9 o'clock, A. M., reports of the Domestic Missionary Society with addresses and a contribution; at 3 o'clock, P. M., a communion sermon and the administration of the Lord's supper.

The convention did not, for many years after its organization, publish any statistics, unless occasionally the number of ministers. In 1803, it appears from the records that there were in Vermont 33 settled ministers or pastors, 10 unsettled ministers and 6 candidates. According to the last report, (Sept. 1841,) there were in connection with the convention 283 churches, having 22,666 members; 193 settled ministers; 43 stated supplies, 50 destitute churches, many of them consisting of a very few individuals, being in the mountain districts, or in towns where the inhabitants belong generally to other denominations; 37 unsettled ministers, and 21 candidates.

Those who wish to examine the history of the churches more in detail, may consult as follows: For the State, the *Advertiser*, and the *American Quarterly Register*, v. XI, pp. 32-44, especially the references, pp. 34-35; for Addison county, v. XII, p. 52; Franklin county, v. XII, p. 323; Windham county, v. XIII, p. 29; Caledonia county, v. XIII, p. 290; Essex county, v. XIII, p. 448; Rutland county, v. XIV, p. 34; Lamoille county, v. XIV, p. 129.



Troy Conference Academy.

SECTION III.

Methodist Episcopal Church in Vermont.

BY REV. CYRUS FRIEDLE.

In giving the outlines of a history of the Methodist Episcopal Church in Vermont, it is necessary to remind the reader

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ARTICLES OF THE CHURCH.

of the fact, that their organization and practical economy differ, in some particulars, from all other denominations in the community. Among these are,—

1. The division of their work into circuits and stations. The former, sometimes, and especially in earlier years, embracing a whole county or more; while the latter is restricted to a single congregation. Stations, of late years, however, have been greatly multiplied, as the ability of the people has been deemed sufficient to give a competent support to a stated ministry.

2. The itinerant system; removing the ministry every year, or at the end of two years, is another peculiarity belonging to the Methodist Episcopal Church. These features of their economy render the task of giving a history in detail more difficult than would be the case, did they partake of the stationary form, as is the fact with most other branches of the Christian church.

From public records, and the testimony of aged persons now living, the fact is well established, that the first Methodist society in Vermont was organized at Ver-shire, in 1796. This was effected through the labors of the Rev. Nicholas Sneathen, a man of powerful mind and prominent standing in the Methodist Epis. Church at that time, as the fact of his being chaplain to Congress for several years is sufficient proof. Soon after this, a society was formed in Barnard, and in 1797 one in Barre. This was the origin of Methodism in the eastern part of the state.

In 1798 the Rev. Messrs. Joseph Mitchell and Abner Wood were appointed to labor on what was then called Vergennes circuit; and in the following year, the celebrated Lorenzo Dow, who was then a Methodist itinerant preacher, was stationed upon Essex circuit, lying north and east of Burlington.

From these periods, the Methodists enlarged the sphere of their operations, and societies were raised up in all parts of the state, until, at the present time, they have churches established in almost every town, to which the gospel is regularly preached and the ordinances administered. In the early history of the Methodist Episcopal Church in Vermont, there were instances of violent opposition to those ministers who first entered this field, over which the author of this article would draw an impenetrable veil of concealment, did not historic truth require an allusion to them. Wesleyan theology, maintaining the universality of the atonement by the Lord Jesus Christ, the conditionality of salvation by faith, roused up to opposi-

tion many who regarded themselves as the accredited expounders of the word of God, and entitled to the immunities of imparting instruction, from a pre-occupancy of the ground. In a few instances personal violence was resorted to by the profane, but the more common method of opposing what was then considered heretical, was public and private disputation. These days of controversy, however, have passed away; and calm investigation, and the practical results of the labors of this branch of the Christian church, have led most to the recognition of the members of this communion, as "brethren beloved in the Lord."

In their early history, the ministry of this church experienced no little inconvenience in their labors, in being without suitable accommodations for divine worship. The consequence was that for many years they occupied school houses and private dwellings for preaching places; thankful, indeed, if these were not closed against them. Among the early ministers who introduced Methodism into this state, beside those already mentioned, were Ralph Williston, Joseph Crawford, Henry Ryan, Robert Dyer, Peter Vannest, Elijah Chichester, Jesse Lee, Timothy Dewey, Truman Bishop, Thomas Branch, James Coleman, Laban Clark, Ezekiel Canfield, Solomon Langdon, Paul Dustin, Samuel Draper, Oliver Beal, Elijah Hedding, Ebenezer Washburne, and Dan Young.

The following are the articles of religion adhered to by the Methodist Episcopal Church, not only in Vermont, but throughout the Union:

I. Of Faith in the Holy Trinity. There is but one living and true God, everlasting, without body or parts, of infinite power, wisdom, and goodness: the maker and preserver of all things, visible and invisible.—And in unity of this Godhead, there are three persons of one substance, power, and eternity;—the Father, the Son, and the Holy Ghost.

II. Of the Word, or Son of God, who was made very Man. The Son, who is the Word of the Father, the very and eternal God, of one substance with the Father, took man's nature in the womb of the blessed Virgin; so that two whole and perfect natures, that is to say, the Godhead and manhood, were joined together in one person, never to be divided, whereof is one Christ, very God and very man, who truly suffered, was crucified, dead and buried, to reconcile his Father to us, and to be a sacrifice, not only for original guilt, but also for actual sins of men.

III. *Of the Resurrection of Christ.* Christ did truly rise again from the dead, and took again his body, with all things appertaining to the perfection of man's nature, wherewith he ascended into heaven, and there sitteth until he return to judge all men at the last day.

IV. *Of the Holy Ghost.* The Holy Ghost, proceeding from the Father and the Son, is of one substance, majesty, and glory, with the Father and the Son, very and eternal God.

V. *The sufficiency of the Holy Scriptures for Salvation.* The Holy Scriptures contain all things necessary to salvation: so that whatsoever is not read therein, nor may be proved thereby, is not to be required of any man, that it should be believed as an article of faith, or be thought requisite or necessary to salvation. In the name of the Holy Scripture, we do understand those canonical books of the Old and New Testament, of whose authority was never any doubt in the church.

The names of the Canonical Books. Genesis, Exodus, Leviticus, Numbers, Deuteronomy, Joshua, Judges, Ruth, The First Book of Samuel, The Second Book of Samuel, The First Book of Kings, The Second Book of Kings, The First Book of Chronicles, The Second Book of Chronicles, The Book of Ezra, The Book of Nehemiah, The Book of Esther, The Book of Job, The Psalms, The Proverbs, Ecclesiastes or the Preacher, Cantica, or Songs of Solomon, Four Prophets the greater, Twelve Prophets the less: All the Books of the New Testament, as they are commonly received, we do receive and account canonical.

VI. *Of the Old Testament.* The Old Testament is not contrary to the New; for both in the Old and New Testament, everlasting life is offered to mankind by Christ, who is the only Mediator between God and man, being both God and man. Wherefore they are not to be heard, who feign that the old fathers did look only for transitory promises. Although the law given from God by Moses, as touching ceremonies and rites, doth not bind Christians, nor ought the civil precepts thereof of necessity be received in any commonwealth; yet, notwithstanding, no Christian whatsoever is free from the obedience of the commandments which are called moral.

VII. *Of Original or Birth Sin.* Original sin standeth not in the following of Adam, (as the Pelagians do vainly talk,) but it is the corruption of the nature of every man, that naturally is engendered of the offspring of Adam, whereby man is very far gone from original righteousness,

and of his own nature inclined to evil, and that continually.

VIII. *Of Free Will.* The condition of man after the fall of Adam is such, that he cannot turn and prepare himself, by his own natural strength and works, to faith, and calling upon God; wherefore we have no power to do good works, pleasant and acceptable to God, without the grace of God by Christ preventing us, that we may have a good will, and working with us, when we have that good will.

IX. *Of the Justification of Man.* We are accounted righteous before God, only for the merit of our Lord and Saviour Jesus Christ by faith, and not for our own works or deservings:—Wherefore, that we are justified by faith only, is a most wholesome doctrine, and very full of comfort.

X. *Of Good Works.* Although good works, which are the fruits of faith, and follow after justification, cannot put away our sins, and endure the severity of God's judgments: yet are they pleasing and acceptable to God in Christ, and spring out of a true and lively faith, insomuch that by them a lively faith may be as evidently known, as a tree is discerned by its fruit.

XI. *Of Works of Supererogation.* Voluntary works, besides over and above God's commandments, which are called works of supererogation, cannot be taught without arrogancy and impiety. For by them men do declare that they do not only render unto God as much as they are bound to do, but that they do more for his sake, than of bounden duty is required: whereas Christ saith plainly, When ye have done all that is commanded you, say, We are unprofitable servants.

XII. *Of Sin after Justification.* Not every sin willingly committed after justification, is the sin against the Holy Ghost, and unpardonable. Wherefore, the grant of repentance is not to be denied to such as fall into sin after justification: after we have received the Holy Ghost, we may depart from grace given, and fall into sin, and by the grace of God, rise again and amend our lives. And therefore they are to be condemned, who say they can no more sin as long as they live here: or deny the place of forgiveness to such as truly repent.

XIII. *Of the Church.* The visible Church of Christ is a congregation of faithful men, in which the pure word of God is preached, and the sacraments duly administered according to Christ's ordinance in all those things that of necessity are requisite to the same.

XIV. *Of Purgatory.* The Romish

doctrine concerning purgatory, pardon, worshipping, and adoration, as well of images as of relics, and also invocation of saints, is a fond thing, vainly invented, and grounded upon no warrant of Scripture, but repugnant to the word of God.

XV. *Of speaking in the congregation in such a Tongue as the People understand.* It is a thing plainly repugnant to the word of God, and the custom of the primitive church, to have public prayer in the church, or to minister the sacraments, in a tongue not understood by the people.

XVI. *Of the Sacraments.* Sacraments ordained of Christ, are not only badges or tokens of Christian men's profession; but rather they are certain signs of grace, and God's good will towards us, by the which he doth work invisibly in us, and doth not only quicken, but also strengthen and confirm our faith in him.

There are two sacraments ordained of Christ our Lord in the Gospel; that is to say, Baptism and the Supper of the Lord.

Those five commonly called sacraments; that is to say, Confirmation, Penance, Orders, Matrimony, and Extreme Unction, are not to be counted for sacraments of the Gospel, being such as have partly grown out of the corrupt following of the apostles: and partly are states of life allowed in the Scriptures, but yet have not the like nature of Baptism and the Lord's Supper, because they have not any visible sign, or ceremony ordained of God.

The sacraments were not ordained of Christ to be gazed upon, or to be carried about; but that we should duly use them. And in such only as worthily receive the same, they have a wholesome effect or operation: but they that receive them unworthily, purchase to themselves condemnation, as St. Paul saith, 1 Cor. xi, 29.

XVII. *Of Baptism.* Baptism is not only a sign of profession, and mark of difference whereby Christians are distinguished from others that are not baptized: but it is also a sign of regeneration, or the new birth. The baptism of young children is to be retained in the church.

XVIII. *Of the Lord's Supper.* The Supper of the Lord is not only a sign of the love that Christians ought to have among themselves one to another, but rather is a sacrament of our redemption by Christ's death: insomuch, that to such as rightly, worthily, and with faith receive the same, the bread which we break is a partaking of the body of Christ; and likewise the cup of blessing is a partaking of the blood of Christ.

Transubstantiation, or the change of the substance of bread and wine in the Sup-

per of our Lord, cannot be proved by Holy Writ, but is repugnant to the plain words of Scripture, overthroweth the nature of a sacrament, and hath given occasion to many superstitions.

The body of Christ is given, taken, and eaten in the Supper, only after a heavenly and Spiritual manner. And the means whereby the body of Christ is received and eaten in the Supper, is faith.

The sacrament of the Lord's supper was not by Christ's ordinance reserved, carried about, lifted up, or worshipped.

XIX. *Of both kinds.* The cup of the Lord is not to be denied to the lay people: for both the parts of the Lord's Supper, by Christ's ordinance and commandment, ought to be administered to all Christians alike.

XX. *Of the one oblation of Christ, finished upon the cross.* The offering of Christ once made, is that perfect redemption, propitiation, and satisfaction for all the sins of the whole world, both original and actual: and there is none other satisfaction for sin but that alone. Wherefore the sacrifice of masses, in the which it is commonly said, that the priest doth offer Christ for the quick and the dead, to have remission of pain or guilt, is a blasphemous fable, and dangerous deceit.

XXI. *Of the Marriage of Ministers.* The ministers of Christ are not commanded by God's law either to vow the estate of single life, or to abstain from marriage; therefore it is lawful for them, as for all other Christians, to marry at their own discretion, as they shall judge the same to serve best to godliness.

XXII. *Of the rites and ceremonies of Churches.* It is not necessary that rites and ceremonies should in all places be the same, or exactly alike: for they have been always different, and may be changed according to the diversity of countries, times, and men's manners, so that nothing be ordained against God's word.—Whosoever, through his private judgment, willingly and purposely doth openly break the rites and ceremonies of the church to which he belongs, which are not repugnant to the word of God, and are ordained and approved by common authority, ought to be rebuked openly, that others may fear to do the like, as one that offendeth against the common order of the church, and woundeth the consciences of weak brethren. Every particular church may ordain, change, or abolish rites and ceremonies, so that all things may be done to edification.

XXIII. *Of the rulers of the United States of America.* The president, the congress, the general assemblies, the gov-

METHODIST EPISCOPAL CHURCH.

SEMINARIES AT NEWBURY AND POULTNEY.

ernors, and the councils of state, as the delegates of the people, are the rulers of the United States of America, according to the division of power made to them by the constitution of the United States, and by the constitutions of their respective states. And the said states are a sovereign and independent nation, and ought not to be subject to any foreign jurisdiction.

XXIV. *Of Christian Men's Goods.* The riches and goods of Christians are not common, as touching the right, title, and possession of the same, as some do falsely boast. Notwithstanding, every man ought, of such things as he possesseth, liberally to give alms to the poor, according to his ability.

XXV. *Of a Christian Man's Oath.* As we confess that vain and rash swearing is forbidden Christian men by our Lord Jesus Christ and James his apostle; so we judge that the Christian religion doth not prohibit, but that a man may swear when the magistrate requireth, in a cause of faith and charity, so it be done according to the prophet's teaching, in justice, judgment, and truth."*

According to the statistical returns for 1841, the following exhibit will present the reader with the present condition of Methodism in Vermont:

Members,	16,039
Traveling ministers,	128
Local do.	112
Total,	16,279

From the best returns that could be obtained, it appears there are 92 churches owned exclusively by the Methodist Episcopal Church in Vermont, and some 40 or 50 others, in which the right of occupancy belongs to them a part of the time. There are also about 40 church parsonages; and these, as well as churches, are yearly multiplying.

From an early period in the history of the Methodist Episcopal Church, the necessity of founding institutions of learning was deeply felt, and vigorous efforts were made to carry into effect these provisions for the education of youth. But the destruction of their buildings twice by fire, near Baltimore, Md., tended for a season to dishearten the friends of this enterprise. Within a few years past, however, a revival of this spirit has manifested itself, and a plan of liberal educa-

tion, comprehending to some extent every state in the Union, is now being carried into effect. The Methodists have two institutions in this state, of a high rank, where nearly all the branches of classical education are taught that appertain to a collegiate course.

The first of these is located at Newbury, upon the Connecticut river; and is surrounded by the charms of nature and art, to attract the youth of eastern Vermont and those parts of New Hampshire, for whose benefit it was established. The cost of the buildings and a farm connected with the institution, has been from \$20,000 to \$30,000. The number of students, male and female, during the year, will range from 300 to 390. The name of this institution is, the *Newbury Seminary*.

The other institution is located at West Poultney, Rutland county, bordering upon the state of New York, and is called the *Troy Conference Academy*. The buildings are splendid and spacious, sufficient to accommodate 200 students in the boarding department, and an additional hundred would find room in the department of instruction, of those boarding with the inhabitants in the vicinity. The cost of the buildings, farm, &c., has been about \$40,000. And perhaps there is no institution of the professed grade of this, which ranks higher in literary merit, or any whose location promises better security to the health and morals of youth. The scenery around is such as will please the taste, and improve the intellect. The number of students instructed in this institution yearly will range from 300 to 400.

The above results are the fruits of the forty five years last past; and considering the disadvantages under which this branch of the church has labored in that time, and the comparatively feeble instrumentalities that have been employed, they furnish strong reasons for gratitude to God, by whose free grace the ministry of reconciliation have not labored in vain, nor spent their strength for naught."

* These articles, with the exception of the XXIII, which relates to civil rulers, are in the language of the XXXIX articles of the Church of England, from which they are selected and abridged, and, as far as they go, they are the same as the articles of the Protestant Episcopal Church in the United States.

* An account of the *Methodist Protestant Church* in this state was expected from a clergyman of that denomination in season to be inserted here, but it has not been received, and we have not in our reach the means of preparing one of our own. From the minutes of the annual conference of this church held at Richmond in 1840, it appears that the Vermont District embraced at that time, 10 circuits, and four missions in which were 20 ministers and 1107 members. But as the Vermont District embraces a considerable section of the state of New York, we are unable to say how many of these are within our own state. The Protestant Methodist are believed to differ from the Episcopal Methodists chiefly in their rejection of the Episcopal form of church government.



Baptist Church, Brandon.

SECTION IV.

Baptist Churches in Vermont.

BY REV. C. A. THOMAS.*

In the early settlement of Vermont, few of the inhabitants were Baptists, and these few generally poor. In 1761, Mr. Samuel Robinson, with a large number of separatists or new lights, commenced a settlement in the town of Bennington. Among these separatists, were some who imbibed the sentiments of the Baptists; but as Bennington was for many years a little government by itself, exercising civil and ecclesiastical jurisdiction over its inhabitants, the Baptists generally repaired to places adjacent, and many of them settled in the towns of Pownal and Shaftsbury. In these places, they formed themselves into religious communities, upon the principles of civil and religious freedom. The foregoing circumstances, re-

specting the Baptists in Bennington and its vicinity in the south-west corner of the state, were similar to those which existed in Brattleboro' and vicinity, in the south-east corner. The settlers of Brattleboro' were emigrants from Massachusetts, and they readily adopted the measures of their native state in support of religion, so that Brattleboro' became a place uninviting to Baptists. But the towns of Guilford and Dummerston, the one lying at the south, and the other at the north of Brattleboro', were resorted to by them, as places where they could enjoy their religious liberty. Thus while Brattleboro' and Bennington were unwelcome to Baptists, they repaired to towns adjacent, where they settled, and organized churches.

The first Baptist church, in Vermont, was constituted, in Shaftsbury, in 1768. Another church was constituted in the same town, in 1780; another, in 1781; and a fourth in 1788. A Baptist church was constituted in Pownal, in 1773; and another, in the same town, in 1780. In Guilford a Baptist church was organized, in 1770; another, in 1772; another, in 1783; and a fourth, in 1791; and a church in Dummerston, in 1783.

In 1790, there were thirty-five Baptist churches in Vermont, with 1600 communicants. These, however, were mostly confined to the four southern counties. The denomination increased very rapidly, in the state, until about 1796, when the sale of the military lands, in the state of New York, attracted the attention of the inhabitants of Vermont, and drew off multitudes to those new settlements. Since that time, there has been a constant emigration to the western sections of the country; and the Baptist denomination has contributed largely towards swelling this tide of emigration; so that some of the churches, which were once large and prosperous, are now small and feeble, if not extinct. For the last twenty years, however, there has been a gradual increase of the Baptists in Vermont, especially in the north part of the state; so that there are now, in 1841, about one hundred and forty churches, upwards of one hundred ordained ministers, twenty of whom may be superannuated, and upwards of eleven thousand communicants.

Among the first Baptist ministers that visited this state were Elisha Ransom, Joseph Cornell, Thomas Skeel, Elisha Rich, Hezekiah Eastman, Wm. Bentley, John Heberd, John Peak, Caleb Blood, Whitman Jacobs, Isaiah Stone, Ephraim Sawyer, Elnathan Phelps, Roswell Smith, Timothy Grow, James Parker, Henry and Calvin Chamberlin, Jedediah Heberd,

* Kindly furnished in behalf of the Baptist Convention of Vermont, to which body application was made for the same.

BAPTIST CHURCHES.

Sylvanus Haynes, Isaac Webb, Henry Green, Aaron Leland, Isaac Beal, Joseph Call and Samuel Kingsbury. These ministers did not all remove into the state. While some came, and took the pastoral care of churches; others came, and served as itinerants; and others still were mere adventurers to seek a home, and enjoy religious freedom. The education of these early ministers did not extend generally beyond the rudiments of a common English education, and yet their ministry was well adapted to the condition of the people of that period. They were persons of great natural ability, close students of the Bible, and careful observers of men and things. Having had a thorough physical training, they were prepared to endure great hardships, and encounter formidable obstacles. "They toiled in the cold and in the heat, by day and by night, traversing the wilderness from one solitary dwelling to another, by marked trees, and half made roads, fording rivers and streams, often without a guide, and at the hazard of their lives. They frequently had to pursue their journeys through storms of snow and rain, to meet their appointments, and administer, to the perishing, the bread of life." Such were the men whom God was pleased to honor in the planting and watering of the early Baptist churches in Vermont. Their literary qualifications, it is admitted, were not great; but they were men of prayer and experience, intimately acquainted with the truths of the Bible, and possessing a strong desire to proclaim these truths to the scattered inhabitants whom they found in the wilderness. And the people of those early days would travel very cheerfully many miles to hear a sermon. And they travelled, not on the good roads, and with the convenient vehicles of modern times; but over bad roads, on foot, on horse back, and on sleds to the place of meeting, eager to hear the word of life. And moreover the place of worship then was not the commodious and comfortable temple of these days; but it was a log building—a log barn in summer, and a log dwelling house or school house in winter; and often the house was so small, that most of the hearers were obliged to be without, seated on logs, while the preacher stood at the door, and proclaimed his message. And it is said that under all these privations and inconveniences the utmost order prevailed.

The Baptists of Vermont, as well as Baptists generally, have been strenuous advocates of religious liberty. The inhabitants of the territory now called Vermont, were, for many years, as to their

ASSOCIATIONS OF CHURCHES.

religious affairs, governed solely by the regulations of the places, whence they emigrated; and as by far the greater part of the early settlers were Congregationalists from Massachusetts and Connecticut, they, of course, gained the ascendancy, and advocated the support of the gospel by measures which were repulsive to Baptists. The first act of the state regulating the support of the gospel, was passed October 26, 1797.* This law bound the inhabitants of each town or parish to be of, and to support the leading denomination; or to show that they were of different views, and supported the gospel elsewhere. And even this was not a security in all cases; for sometimes persons were much annoyed after they had submitted to these humiliating regulations. This law was in force, until the year 1807, when it was repealed. The bill proposing the repeal of this law, was contested two years in the legislature, before it passed. At that time, Aaron Leland, a Baptist minister, was speaker of the house, and Ezra Butler, a Baptist minister, was an active member of the council. Since that time, all laws regulating the support of religious worship, have been done away; and the gospel in Vermont is left, as it ought to be everywhere, to be sustained by its advocates and friends.

The Baptist churches in Vermont have united generally in clusters, called associations, not for the purpose of legislating for the churches, since the churches are considered independent one of another, and accountable alone to Christ their head; but they have associated for the purpose of mutual improvement, and more efficient action. At the annual session of the association, each church belonging to the body is required to represent itself by delegates, and an account of what has been its condition during the year. The first association that was formed in this state, was the Shaftsbury association in the town of Shaftsbury, in 1780. This association, being located in the southwestern corner of the state, was composed for the most part of churches in New York and Massachusetts. These churches, however, have nearly all been dismissed to form other associations, so that the Shaftsbury association is now mostly confined to Bennington county in this state. There were belonging to this association, at its last session, in 1841, eight churches, and about eight hundred communicants.

* This is a mistake, so far as relates to its being the first act regulating the support of the gospel. An act precisely similar in principle to the one above named, and nearly the same in detail, was passed on the 19th of October, 1787.

BAPTIST ASSOCIATIONS.

BAPTIST CONVENTION.

The Woodstock association was organized at Woodstock in 1783. Many of the churches, originally connected with this body, were in the state of New Hampshire. But this association is now principally confined to Windsor county in this state. They report, at their last session in 1841, twenty-three churches, and two thousand eight hundred communicants.

The Vermont association was organized at Manchester in 1785. This association, being the first that was composed of churches chiefly within the limits of the state, received the name of the Vermont association. At its last anniversary in 1841, there were thirteen churches, and one thousand and one hundred communicants, included for the most part in Rutland county.

The Richmond, known now by the name of the Fairfield association, was formed in the town of Richmond in 1795. In 1812, there were three churches in the Province of Lower Canada belonging to this body, with one of which the association was to hold its session that year. But in consequence of the war between the United States and Great Britain, it was deemed best by the churches in Vermont not to send their delegates into Canada, but to have them meet in the town of Fairfield, and hold their session. From this circumstance, the association received a new name which it still retains. There were belonging to this body in 1841, fifteen churches and upwards of nine hundred members, included chiefly in Franklin county.

The Barre association was formed at Barre in 1807. It is now principally confined to Orange county, and contains sixteen churches, with about six hundred members. Most of the churches are feeble, and destitute of pastors.

The Danville association was constituted at Danville in 1810. This association extends over several counties in Vermont, and some portion of Canada. Its statistics in 1841 were twenty three churches, and upwards of one thousand and four hundred communicants.

The Windham county association was organized in 1830. The churches of which it was composed formerly belonged to the Leyden association in Massachusetts; but in 1830, they were set off, and being mostly in Windham county, received the name of the Windham county association. In 1841, it reported fourteen churches, with about one thousand and two hundred members.

The Addison county association was formed in 1833 of churches principally in Addison county, and formerly belonging

to the Vermont association. According to its last report in 1841, there were twelve churches with one thousand and seventy members connected with this body.

The Onion river association was organized in 1834. The churches composing this body are chiefly in Chittenden county, and were formerly connected with the Fairfield association. There were fifteen churches, with one thousand, one hundred and fifty five members connected with it in 1841.

Besides these nine associations, there are, belonging to the Baptists in Vermont, other organizations, more specific and extended in their character. In 1806, a missionary society was formed which was productive of much good. It afforded aid to many feeble churches, and furnished missionaries to labor in destitute portions of the state and in Canada. In 1814, this society was remodeled and enlarged, and became auxiliary to the Baptist board of Foreign Missions. This society, after a course of successful operation for several years, merged itself in the State convention.

The Baptist convention of Vermont was proposed and planned at Montpelier in October 1823, by the following persons: Ezra Butler, Aaron Leland, James Parker, Jonathan Huntley, Isaac Sawyer, J. W. Sawyer, C. C. P. Crosby, John Ide and J. D. Farnsworth. The convention was organized in October 1824, in aid of domestic and foreign missions. This missionary body has now been in successful operation sixteen years. Besides aiding churches and supporting missionaries at home, it has contributed generously in sustaining the missionary enterprise abroad.

In 1828, the Vermont Baptist Sunday School Union was formed, which, at its anniversary in 1841, gave the following statistics: 78 schools, 544 teachers, 5111 scholars, and 8369 volumes in the libraries.

The Vermont branch of the Northern Baptist Education Society, was constituted in October, 1830. By the instrumentality of this society, many pious, indigent young men have been assisted in their preparation for the gospel ministry, and although the number of persons now receiving assistance is not large, still the "branch" may be considered, as in a prosperous condition.

In 1837, the Vermont Bible Society, auxiliary to the American and Foreign Bible Society, was formed; and liberal sums are annually contributed in aid of a pure and exact translation of the sacred scriptures into the languages of the nations of the earth.

BAPTIST SEMINARIES.

The Baptists generally in Vermont are active in the cause of temperance; and in the anti-slavery cause, they are not behind any of their neighbors, but rather take the lead.

The Baptists in this state, like the Baptists in other sections of the country, have been slow to adopt vigorous and systematic measures for the education of their sons, inclined to the gospel ministry. They have been thus backward, not because, as a body, they have been opposed to education and improvement; but because they thought that they discovered, in some leading denominations, a disposition to lay more stress upon learning, than upon piety, and to use coercive measures in sustaining their learned ministry. All this prejudiced the minds of Baptists, and made them cautious in adopting measures for the education of their sons. The Baptists did not, at first, consider and admit, as they now very generally do, that while piety is considered as the mistress in the gospel ministry, learning may be considered as her handmaid; and that when the mistress and the handmaid are associated, the ministry will more readily command a voluntary support. Many of the young men, from the Baptist denomination in this state, have graduated at some one of the colleges in the land, with very creditable testimonials of scholarship and piety. Some of these are now filling important stations, as pastors of churches, or as professors in our highest seminaries of learning, or as missionaries to the heathen. In 1833, the Baptists, in this state, located an institution in Brandon, called the *Vermont Literary and Scientific Institution*. The building is of brick, commodious and pleasant; measuring 100 feet by 40, and three stories high, exclusive of the basement, furnished with a good library and philosophical apparatus. This institution has not received that aid from the denomination which it had reason to expect when established.

Several other schools have been opened in the state, under the immediate supervision of the Baptists. Black River Academy, located at Ludlow, was opened in 1835. The building is of brick, two stories high, measuring 60 feet by 40. The Leland English and Classical School, established at Townshend, affords facilities for acquiring a thorough education. The Derby Institute, located at Derby in the north part of the state, is very pleasantly situated, and has recently commenced operations under favorable circumstances. These institutions are all under the patronage of the Baptist denomination, but furnish equal advantages to all who may

be desirous of enjoying their benefits.

The Baptist denomination in Vermont, as well as the Baptist denomination at large, differs from all other denominations, in their principles of church policy. The Baptists are distinguished for their simple adherence to the Bible, as their rule of faith and practice, and resort not to other authorities to be guided and established. They are distinguished for their warm adherence to religious liberty, and disclaim all alliance between church and state, and all civil interference with the rights of conscience. They are distinguished for their adherence to a personal profession of faith, and an immersion of the body in water, as essential to Christian baptism.

The Baptists, in common with other denominations, believe that baptism is a prerequisite to a participation of the Lord's Supper. Hence they feel sacredly bound to observe this arrangement, and that there would be a departure from the rule of their Divine Master, were they to admit to his table, those who have not previously been baptized. With few exceptions, all Christian denominations practice on this belief, and admit none to the sacramental board, who have not in their judgment, been baptized. The principle on which Baptists and other denominations act in this instance is the same; and other denominations, who make baptism, or something that they call baptism, a prerequisite to coming to the ordinance of the supper, cannot censure the practice of the Baptists, without condemning their own, for Baptists only require, what in their view alone constitutes this prerequisite, which is, *Believe and be immersed*.

SECTION V.

Free Will Baptist Churches in Vermont.

BY ELDER ZEBINA YOUNG.

The *Free Will Baptist* denomination was founded at Barrington, N. H., about the year 1780, by Elder Benjamin Randel, who was converted in the year 1770, through the instrumentality of the Rev. George Whitefield. The denomination soon spread into New Durham, and other adjacent towns. About the year 1791, a lay member of the New Durham church, whose name was Robert Dickey, came to Strafford, Vt., to assist a relative in making a settlement at that place. While laboring there in the capacity of a hired man, his spirit was stirred within him when he saw the people living in sin, and

QUARTERLY AND YEARLY MEETINGS.

UNITARIAN CHURCHES.

many of them in open profanity. He accordingly began to exhort them to turn to the Lord, and about thirty were hopefully converted through his instrumentality. These converts desired to belong to the New Durham church, 110 miles distant from them. Accordingly they sent to that church for help, and in the summer of 1792 Elders Benjamin Randel and John Buzzell visited them, preached a few times with them, and baptized a number. In January, 1794, Elder Randel made them another visit, but found them confused in their sentiments and divided in their feelings, and he returned entirely discouraged in regard to them. About the last of February following, Elder John Buzzell visited them again, and succeeded in organizing nine into a church, who entered into a covenant with each other to take the scriptures for their only rule of faith and practice. This church was organized about the first of March, 1794, and was the first Free Will Baptist church in Vermont. It is now in a flourishing condition, consisting of 200 members.

At the present period, churches are organized in various parts of the state, and the several churches situated in the same neighborhood are associated together; and delegates from these associated churches assemble once in three months forming a *Quarterly Meeting*, at which reports are made respecting the condition of the respective churches. The several quarterly meetings are also associated together, and delegates from these meet annually forming a *Yearly Meeting*. There is also a *General Conference*, which assembles once in two years, and is composed of delegates from all the churches in the connection. Each of the individual churches has a monthly meeting for mutual edification and comfort.

The Yearly Meeting of Free Will Baptists in this state, comprises in its connection, at the present time, 100 churches, 68 ordained ministers, 9 licentiates, and 4423 communicants.

Their *form of church government* is democratic, each member having an equal opportunity to speak and vote in all the business of the church.

Some of the principles of doctrine held by this denomination are the following, viz: That man was created in the image of God, which image consisted in righteousness and true holiness. That he was rendered amenable to a moral law, which law, through the influence of the tempter, he transgressed, whereby he lost the divine image, and became a depraved, sinful being, subject to death; from which

deplorable condition he could not deliver himself; and that God, in the plenitude of his love, sent his son to die the just for the unjust. That man is now, and has been ever since the apostacy, dependent for salvation upon the redemption effected through the blood of Christ, and upon being created anew unto holiness through the operation of the Holy Spirit, both of which are provided for every son of Adam.

They hold that as the regenerate are placed in a state of trial during this life, their future obedience is neither determined nor certain, but though they may turn away from their righteousness, commit iniquity and die thereby: yet it is their privilege and duty to be steadfast in the truth—to grow in grace—persevere in holiness, and make their election sure.

The ordinances of the church as held and practised by this denomination, are Baptism, or the immersion of believers in water, in the name of the Father, Son and Holy Ghost, and the holy sacrament of the Lord's supper.

They believe that the soul, or spirit, immediately after death, enters a state of happiness or misery, according to the character formed, and the deeds done in the body: and that there will be a resurrection both of the just and unjust,—the saints to be raised in the likeness of Christ; but the wicked to awake to shame and everlasting contempt: and finally, that there is to be a general judgment, when time and man's probation will cease forever, and all men will be judged according to their works, the righteous will enter into eternal life, and the wicked will go into a state of endless punishment.

SECTION VI.

Unitarian Churches in Vermont.

BY REV. GEORGE C. INGERSOLL.

Unitarian is a comprehensive term, including all those christians who believe in the strict, personal unity of the Deity—that "there is but one God the Father," and not a trinity of Father, Son, and Holy Spirit. In this interpretation there are many Unitarians in various parts of Vermont. But of the denomination more particularly denoted by this term, there are but four regularly organized congregations.

These, like those of the same name throughout New England, are, in mode of

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church discipline and worship, Congregationalists—maintaining that each particular church has authority from Christ for exercising government and enjoying all the ordinances of worship within itself, and that the only terms of admission to Christian privileges consist in the acknowledgment of the great Protestant principle—the Bible is the religion of Protestants.

They also maintain the authority and obligation of the two Christian rites, Baptism and the Lord's Supper—the former to be administered to believers and their children; the latter open to all who profess "repentance toward God and faith toward our Lord Jesus Christ."

Receiving the scriptures of the Old and New Testament, as containing authentic records of the dispensations of God and of his revelations to men, and thus regarding the Bible as the only summary of religion, they do not profess to comprise their sentiments in any system of articles to be imposed on their several churches, but offer the hand of Christian friendship to every one who believes that "Jesus is the Christ," "the Son of the living God," "whom the Father sanctified and sent into the world." Unitarians receive Christianity as a divine system originating in the love of God, and having for its object the salvation of men. They believe that Jesus Christ, who came to reveal it, is, in his offices and example, fully entitled to implicit faith, obedience, love and imitation; and that he lived and died, not to make God merciful but to show that he is so. They regard man as free and accountable, and able, through the grace of God, to obey the requirements of the gospel and conform to the conditions of salvation. That to obey is to be happy, while disobedience will be followed by a righteous retribution as declared in God's holy word. And that while man has all motive and encouragement to duty, every thing is the gift of God,—the blessings of this life and the hope of immortality.

Unitarians,—though "ready always to give an answer to every man that asketh a reason of the hope that is in them"—insist that "the liberty wherewith Christ hath made us free," gives to all his followers the right of free inquiry and private judgment. That no individual or body of Christians are authorized to make their opinions the standard of belief; or subscription to their particular creed the sole condition of communion; but that there is "one Master Christ" and that the rule and motto of his followers should be, "liberty, holiness, love."

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Christian Church, Woodstock.

SECTION VII.

Christian Churches in Vermont.*

BY ELDER JASPER HASEN.

This class of christians arose, as a denomination, nearly simultaneously in three different sections of the United States, the southern, the northern, and the western, but remained for some time without any knowledge of each other.

In 1793, James O'Kelley, in company with several other preachers and about 1000 members, separated from the Methodist society in Virginia and North Carolina, and eventually associated together as Christians. They have since spread through different portions of the southern states and number many thousands in their communion.

The first church at the north was gathered at Lyndon, Vermont, in September, 1801, through the instrumentality of Dr. Abner Jones, then a practising physician in that town. He had previously been connected with the Calvinist Baptist church, from which he separated in the year 1794, accompanying his separation with the following declaration: "I embrace the Bible as an all-sufficient rule of faith and practice. I reject all articles and confessions of faith except the Bible. I reject all denominational names as applied to the disciples of Christ, except that of Christian." This declaration he maintained until his death, which occurred at

* This name as here applied is often pronounced Christ-ian, not on account of ignorance or disrespect, but merely to distinguish this class of Christians from Christians of other denominations.

ORIGIN OF THE DENOMINATION.

BOND OF UNION.

Exeter, New Hampshire, on the 24th of May, 1841. Through his instrumentality a church was gathered in Bradford in this state in the year 1802, and in 1803 one in Haverhill and Piermont in New Hampshire, and the same year a church was gathered at Portsmouth in that state by Elder Elias Smith, who for a number of years was one of the most indefatigable and successful laborers in the cause. Soon after several preachers, with almost entire churches of the Baptist denomination, laid aside their articles of faith, renounced the name of Baptist by which they had been distinguished, and agreed to be known as Christians only; and but a short period elapsed before churches were planted in each of the New England and middle states, and in the adjoining British provinces.

On the 10th of September, 1803, at Lexington, Kentucky, Barton W. Stone and four other preachers of the Presbyterian denomination withdrew from the jurisdiction of the Synod and her Presbyteries, and formed themselves into a body called the Springfield Presbytery. On the 28th of June, 1814, this body met in Bourbon county, Ky., and agreed to cast off their assumed name and power, and to sink into the general body of Christians, taking no other name than *Christian*, as the name first given by divine authority to the disciples of Christ. This they announced to the world in an article entitled, "*The last will and testament of Springfield Presbytery*," in which they recommend the Bible as the only sure guide to heaven.

This class of Christians, throughout the country, take to themselves the name of *Christian*, as the universally acknowledged epithet to denote the followers of Jesus Christ. This name they take in common with *all Christians*, and not to distinguish them from a portion of Christ's disciples. Believing that party names are unauthorized, and injurious to the cause of Christ, they decline the assumption of such names themselves, and refuse to acknowledge any that others might be inclined to impose upon them. They regard the scriptures as the most perfect written rule of the Christian's faith and practice—"able to make us wise unto salvation, through faith in Christ Jesus;"—that "all scripture is given by the inspiration of God, and is profitable for doctrine, for reproof, for correction, for instruction in righteousness; that the man of God may be perfect, thoroughly furnished unto all good works." They believe this so complete, so perfect a rule, as given by inspiration of God, that no man, or body of men, since the days of

the Apostles,—Pope, Council, Assembly, or Conference, either local or general,—has been or now are able to improve it by the addition of any thing new, or by the retrenchment of any redundancies; or by any different arrangement, or derangement of its parts; or by selecting detached parts; or by giving what they consider the substance of its truths in their own language, in order to make them a plainer, safer and more perfect guide to the disciples of Christ. They, therefore, form no covenants, creeds, confessions, or articles of faith of their own, and unhesitatingly refuse to accept those, formed by other uninspired men, believing them to be instrumental of division in the church, and injurious to the cause of religion.

They believe that persons become members of the body by union with the *head*—even Christ;—that all, who are united to Christ by faith, stand, from that union to him, in the endearing relationship of brethren to each other, being no longer strangers and foreigners, but fellow citizens with the saints, and of the household of God. They believe that the duties, which Christians owe one another, of brotherly kindness, to watch over each other, to pray one for another, to love and to walk as brethren, grow out of their relation to each other as members of one family;—that those duties are imperiously binding upon all the members of the family, and that it is not left to individual caprice to assume, or refuse those obligations; and that those duties become personally obligatory on the possession of a knowledge of the relation and opportunity to discharge them.

They believe that all true Christians, wherever they have opportunity to associate, should make but one communion; that all who believe on Jesus Christ should be one, and should, in every place, in suitable numbers, convene in one congregation for the enjoyment of Christian privileges and be members of one and the same church.

They accordingly refuse no one the privileges of the church of God with them, who gives satisfactory evidence of being a Christian. Their inquiry is not whether he believes in Calvinism or Armenianism,—whether he is a Trinitarian or a Unitarian; but simply whether he is a Christian. They require no assent to formulas of doctrine "in the words which man's wisdom teacheth, but" *only to those words*, "which the Holy Ghost teacheth." They believe that nothing should shut a person from the fellowship and communion of the members, which does not pre-

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RISE AND ORGANIZATION.

vent fellowship and communion with the head of the church. Any person who can respond to the test, "If thou believest with all thy heart thou mayest," the confession of the Ethiopian, "I believe that Jesus Christ is the Son of God," and who lives a *sober, righteous and godly life*, they profess to receive unhesitatingly, and to welcome to all the privileges of the church of God. They believe in the exercise of true repentance for sin, the experience of remission of sins through the forbearance of God, and that witness of forgiveness, which causes the soul to rejoice with joy unspeakable and full of glory.

The Elders and private brethren chosen for the purpose, and living within a territory convenient for that object, generally meet in conference annually, for mutual edification and comfort, and to consult upon subjects of general interest to the cause of Christ. These associations claim no power, legislative nor judicial, each church acting independently of all others, and meeting in conference, or not, at pleasure, and without prejudice. The number of preachers and communicants belonging to this class of Christians has not been ascertained with precision, but has been estimated, in the whole, at 1000 preachers, and from 100,000 to 130,000 communicants. In Vermont there are between 30 and 40 preachers and churches.



Universalist Chapel, Woodstock.

SECTION VII.

Universalist Churches in Vermont.

BY REV. SAMUEL C. LOVELAND.

The Universalists as a denomination, began to be distinguished as such, in Ver-

mont, in some of the closing years of the last century. The first association of preachers and other brethren of the order, which we have on record, was a meeting of what was called, "The General Convention of Universalists of the New England States and others," in Bennington, in the autumn of the year 1795. This convention had been organized in Massachusetts, ten years before. But we have no account of its finding an open door beyond the boundaries of its native state, till the time of its first meeting in Vermont. In the year 1799, this convention held its annual meeting at Woodstock. These were all the meetings of an associational kind, which were held by Universalists, in Vermont, previously to the commencement of the present century. At this early period, we have no means of information, respecting the existence of churches or societies organized among us in this state. If we may calculate from other circumstances, we shall be led to conclude there were a very few.

In the year 1804, the first ecclesiastical body of the order, in this state, was organized by the name of "The Northern Association of Universalists." Annual meetings of this association have been held, mostly in Vermont, from that period to the present time.

Sometime since the year 1830, the Universalists abolished their General Convention, or, rather, it may be more properly said, resolved it into a United States Convention, which was organized on a new and different plan. Our annual meetings, from this period soon underwent a re-organization throughout the connection in the United States. Each state, where organized bodies of our brethren exist has its convention and so many associations, as the local situations of the brethren require. The Convention of Universalists in Vermont, was organized in the year 1833, and holds an annual meeting in the state, on the fourth Wednesday and Thursday in August. Besides the convention, we have four associations. The Northern Association, which, since the new organization, embraces the counties of Orange, Washington, Caledonia, Orleans, Essex, and part of Lamoille, with some societies in Lower Canada, formerly embraced the whole of Vermont, and was sometimes carried to the adjacent parts of New York and New Hampshire. The Champlain Association includes the counties of Addison, Chittenden, Grand Isle, Franklin, and part of Lamoille, besides some societies in Canada. The Windham and Bennington Association includes the counties of Windham and

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Bennington. The Green Mountain Association includes the counties of Windsor and Rutland.

We, at this time, have about 92 societies, in this state, 62 meeting-houses, owned wholly or in part by Universalists, and not far from 40 preachers.

The Universalists in this state have a periodical, which is owned and published by the Rev. Eli Ballou, at Montpelier. It is published weekly on a super-royal sheet, folio. This paper is the continuation of a pamphlet periodical commenced in the year 1820, which has been published in duodecimo, quarto, or folio form from that time to the present.

The early believers in the final salvation of all men, were not very tenacious, respecting outward forms, such as forming churches, societies, practicing baptism, and the Lord's supper. From the joy of their own hearts in believing, they were much disposed to conclude, that whoever possessed the same faith of universal love, would not only come to the same religious enjoyment, but that these sentiments would lead to all those happy practical results, that should supercede the necessity of outward forms. But experience shows that a thing without a form is an anomaly; and that no body of men can form a concert of action that shall be of a durable nature, without a regular organization. The want of a suitable attention to these things in the first promulgators of our faith is by many now sensibly felt. It extends its influence to the present day, and may for a period yet to come.

By these remarks, we wish the reader, however, not to understand that the forming of churches and societies have ever been altogether neglected among us. Our accounts of churches in this state, extend as far back as the year 1800; and from that period to the present time, we have always had a few. In towns where there is a number of believers, they have generally organized themselves as a society for the purpose of united action in the support of preaching. And these obtain, at this day, in many places where we have no organized churches. We have Sabbath schools and Bible classes, in places where a stated ministry is enjoyed.

Yielding to each individual the rights of conscience with regard to religious tenets, the Universalists have not been disposed, to much extent, to countenance written or printed creeds. We have never deemed it proper for one man to decide what shall be the faith of another. But, as in conformity to the old maxim, that *two cannot walk together except they be agreed*, there

are certain leading points, in which we are very generally united. The belief of universal salvation is the great and leading item of faith that distinguishes us from other denominations in the Christian world. This, we believe to be clearly supported by the sacred pages. The doctrine of punishment or suffering beyond the grave, is not so generally embraced as formerly; yet there are instances of this peculiarity of faith among us.

No Universalists are known who embrace the doctrine of a trinity of persons in the Supreme Being. We are altogether unable from scripture or reason, to divide the godhead into personal distinctions. In a similar light, we view the common doctrine of original sin, total depravity, imputed or substituted righteousness, particular election and reprobation. A portion of these, with infant damnation, seemed based on the old long ago forbidden proverbs that "*the fathers have eaten sour grapes, and the children's teeth are set on edge.*"

Baptism is administered on profession of faith, when required. The celebration of the Lord's Supper, often called the Eucharist, is universal among our churches. Instances of publicly dedicating infant children, in imitation of our Lord's taking them in his arms and blessing them, have been known; but they are not numerous. The practice is much more frequent among our brethren in Massachusetts.

Respecting articles of faith, the general convention at Winchester, N. H., in the year 1803, adopted the three following, from which none of our churches or societies have been known to dissent, and which may be considered as the standard articles of the order:

ARTICLE 1. We believe that the Holy Scriptures of the Old and New Testaments contain a revelation of the character of God; and of the duty, interest, and final destination of all mankind.

ARTICLE 2. We believe that there is one God, whose nature is love; revealed in one Lord Jesus Christ, by one Holy Spirit of grace, who will finally restore the whole human family to holiness and happiness.

ARTICLE 3. We believe that holiness and true happiness are inseparably connected; and that believers ought to be careful to maintain order, and to practice good works; for these things are good and profitable unto men.

Friends or Quakers.—There are some of this denomination in Danby, Ferrisburgh, Lincoln, and several other towns, but we have not succeeded in procuring any particular account of their history.

EPISCOPAL CHURCH.

FIRST MINISTERS AND FIRST CHURCH.

SECTION IX.

Protestant Episcopal Church in Vermont.

BY REV. CARLTON CHASE, D. D.

Among the earlier population of the state of Vermont, we look in vain for the trace of any considerable number of Episcopalians. Being settled almost wholly by emigrants from the older states of New Hampshire, Massachusetts and Connecticut, where very different views of religion prevailed, this district of country would not be likely to show but here and there an individual holding the faith and order and discipline of a church governed by Bishops. Some such there were, however; chiefly emigrants from the state of Connecticut, who from various considerations were disposed to try their fortunes and rear their families in this then wild region, remote from the altars amidst whose solemnities they had themselves been educated,—and always hoping, that the time would come for them to enjoy again the privileges and ministrations of the Church which they loved.

And to a great extent, through the goodness of the Redeemer, these hopes have been realized.

The Rev. Samuel Peters, L. L. D., familiarly known among our older churchmen under the name of "Bishop Peters," tells us, [see his *Life of Hugh Peters*, p. 94,] that he was the first clergyman who visited "Verd Mont," as he calls it. This was in October, 1768, when with a number of gentlemen he ascended to one of the Green Mountain peaks, and there, in sight of lake Champlain on the west and of Connecticut river on the east, and stretching his view over interminable forests northward and southward, proclaimed the name of "VERD MONT." After this, as he states, he passed through most of the settlements, preaching and baptizing for the space of eight weeks. The number baptized by him at that early period, of adults and children, is set down at nearly twelve hundred—a number very remarkable certainly, considering the sparseness of the population. So far as records or credible traditions go, these were the first labors of much importance performed by a clergyman of the Episcopal Church.

At an early period parishes were organized in Manchester, Arlington, Sandgate, Castleton, Tinmouth, Wells, Fairfield, Bethel, Weathersfield and Rockingham. The first two of these are said to have been organized at the first settlement of the state; Manchester, by some emigrants from the western part of Connecticut and from Dutchess county, N. Y., numbering twenty families before the revolution.

The parish at Arlington was organized by Mr. Jehiel Hawley, and consisted of emigrants from Newtown and New Milford, Connecticut. It is stated by the Rev. Mr. Bronson, that the parish last named was sustained by lay-reading and occasional visits from the Rev. Mr. Bostwick of Great Barrington, Massachusetts, until 1778, when Mr. Hawley died.

The troubles about that time drove away many people from both of these churches; so that at the peace of 1783 they were but barely in existence. They then, however, mustered strength and courage to resume lay-reading, and were thus kept alive till 1786, when the Rev. James Nichols was settled at Arlington, and the Rev. Daniel Barber at Manchester.

In 1786 or the year following a church was erected at Arlington, the exterior alone being finished. The interior was not finished till 1803, though in the mean time the congregation had furnished it with moveable seats, and used it for public worship. This might be considered the first church in the state.

During the revolutionary war the cause of the Church suffered, as might be expected, from the hostile feeling every where entertained towards England and England's institutions. Our scattered people, though still adhering resolutely to primitive principles of truth and order, felt much disheartened. While their brethren in other states were actively taking measures for Diocesan organization, they, dispersed in many different settlements, and ignorant of their own numbers, silently acquiesced in spiritual privations, which seemed to be providential, still hoping, that the day would come for the Church to rise. This hope began to be realized in 1789.

In the month of September, 1790, was held the first ecclesiastical convention—from which time the state of Vermont may be considered an organized Diocese. Delegates from eight parishes, with but two clergymen, the Rev. James Nichols and the Rev. Daniel Barber, met at Arlington. The Rev. Mr. Nichols delivered a sermon, and the convention was organized by choosing Mr. Eleazer Baldwin chairman, and the Rev. Mr. Barber secretary.

One great object in the assembling of this body was to take measures for securing to the Church the possession of its lands—the Glebes, and the grants to the society for the propagation of the Gospel. For this purpose a committee of two persons was appointed to carry the subject before the General Assembly of the state. From the proceedings of the Convention in 1793 it appears, that an application had

BISHOP ELECTED.

REV. SAMUEL PETERS.

been made for an act of incorporation, which was not successful. In this Convention, which was held at Pawlet, business was transacted of great importance. In the hope, that an act of incorporation would be obtained, a committee was appointed to make application to the society in England for a conveyance of its property in Vermont to such Board. The committee consisted of the Rev. Bethuel Chittenden, the Rev. James Nichols, the Rev. Daniel Barber, the Rev. John C. Ogden, Col. Matthew Lyon, and Ebenezer Mervin, Eleazer Baldwin and Truman Squier, Esqrs. The act not being obtained, this measure of course was not pressed.

At the same Convention a committee was appointed, for the first time, to take into consideration the applications of persons desirous of entering into holy Orders; and as they saw fit, to recommend them for ordination. Before this Vermont had furnished, it is believed, but a single individual for the sacred ministry of the Church. That individual was the Rev. Mr. Chittenden.

But by far the most important transaction of the Convention of 1793, was the election of a Bishop. For the purpose of securing that deliberation, which so solemn a procedure demanded, the Convention chose a committee of six to nominate a suitable candidate, and then immediately adjourned to meet on the following day. The committee, on coming together in the morning, nominated the Rev. Edward Bass, D. D., Rector of St. Paul's Church in Newburyport, Massachusetts. The nomination was approved by the Convention, and that gentlemen accordingly elected. The election being made known to him, in due time a favorable answer was returned, in which he declared himself willing to assume the charge and ready for consecration, provided the Convention would dispense with his immediate residence, and accept of temporary visitations, until the income of Church lands should be sufficient to give him an adequate maintenance.

The prospect proving unfavorable in regard to the consecration of Dr. Bass, and a general anxiety prevailing to enjoy the benefit of Episcopal supervision as soon as possible, attention was turned to another quarter. Most singular and reprehensible was the hurry, with which a matter of such solemn moment was pushed forward. The election of Dr. Bass took place on the 19th day of September, 1793. His answer, which amounted to acceptance, is dated January 2, 1794; and yet it appears from a letter of Dr. Peters, published in the *Churchman's*

Magazine for 1807, that a special session of the Convention was held in the month of February immediately following, in which Col. John A. Graham, a delegate from Rutland, put in nomination for that holy and responsible office, the Rev. Samuel Peters, L. L. D., who was his relation and intimate friend. The nomination gave satisfaction; and a formal election immediately took place. Dr. Peters being then in England, the idea was conceived of having him consecrated there. Accordingly Col. Graham was despatched thither, as the agent of the Diocese, to make application to the English Bishops for that purpose. That gentleman, possessed of much address and diplomatic skill, urged the suit most ably and assiduously. But he was unsuccessful; the steadfast answer was, "We have consecrated three Bishops for America already, who are competent to a regular performance of the act of consecration; make your application to them." This was far from being satisfactory, and gave occasion to some curious papers on the subject. Colonel Graham returned and made report of his proceedings in November, 1795. Failing in this design, the Convention directed their President and Secretary to address the three American Bishops, and respectfully to request them to consecrate Dr. Peters. This was declined on the ground, first, that it was not expedient to consecrate a Bishop for a Diocese, that contained but one Presbyterian—which was the case with Vermont at that time—and, secondly, that there were personal objections.

Here the matter ended and we hear no more of the Rev. Samuel Peters, L. L. D.

In the journal of 1796 occurs for the first time the name of the Bishop of Illinois, the Rt. Rev. Philander Chase, D. D., then a young man. He applied to the Convention to give him a recommendation for Deacon's Orders—which was promptly done.

As respects the general state of the Church previous to the year 1800, we may be allowed to close up the century with a few remarks.

Down to the date last mentioned the Church had made but little progress, and gained but little strength. Numbering ten or twelve parishes in all, no one of which felt able to maintain a clergyman alone, she abode quietly (though in the firm possession of her primitive and Apostolic principles) under that neglect—and not unfrequently contempt—with which the strong and independent sects around her were disposed to regard her weakness. With no available resources—no order of

EARLY FRIENDS OF THE CHURCH.

MINISTERS OF THE CHURCH.

learned and able men to illustrate and maintain the grounds of her faith, worship and discipline—without a class of pious, active and studious young men rising up to assume the solemn duties of the ministry—and at the same time crushed beneath prejudice, how could she increase? The writer confesses, with unfeigned satisfaction, his admiration of those excellent and steadfast men—clergymen some, laymen many—who, “shoulder to shoulder,” by the help of God, kept alive the cause of the Church when it seemed to be hopeless, and from utterly becoming extinct, preserving it to better times. Chittenden, Ogden, Pardee, the Hards, the Canfields, the Hawleys, Wooster, Giddings, Squier, Whitlock, Chipman, worthy names!!

As respects Christian piety, a faithful and consistent attention to the various demands of duty both public and private, it is not to be supposed, that under existing circumstances the Church was in advance of surrounding sects. The times did not demand “a forth-putting piety,” as now. It is stated by a respectable clergyman, who commenced his labors near that period, that the great doctrines of grace were but little understood by either the clergy or the laity. It is a “hard saying” to leave on record, without some attention to circumstances. Quite probably among subjects frequently discussed were those connected with the visible peculiarities of the Church, because these were the occasion of repeated attacks.

The number of communicants in all the parishes was small. According to the Rev. Mr. Bronson, who came into the Diocese in 1802, we might set down, for Arlington, Manchester and Sandgate, 20 “pious communicants”—Pawlet and Wells, 15—Shelburne, Fairfield, Bethel and Weathersfield, 30—with scattered individuals in other places sufficient to make up 80 or 90 in all.

The Church is much indebted to the pious and self-denying labors of the Rev. Bethuel Chittenden, who, witnessing with sorrow her desolation, at the age of fifty years forsook his secular pursuits, and with such preparation as a high order of natural talents, with little time and poor advantages, could secure, entered into Holy Orders. He was ordained by Bishop Seabury; labored a few years at Tinmouth and neighboring places; and at length removed to Shelburne, where he remained till his death in 1809—visiting occasionally Fairfield, Weathersfield, Bethel, Pawlet, Wells and Rockingham. He may be said to have “died with his harness on him.” On a Sunday morning, while sit-

ting in his chair with his people assembled around him, and about to engage in the solemnities of the holy communion, his spirit suddenly took its flight to other worlds. He was a man of strong good sense—fond of controversy and skilful in it—but not of a classical education.

The Rev. Daniel Barber officiated several years at Manchester; but the prospect of a speedy recovery of the Church lands failing, he became discouraged and left the Diocese. In advanced age, worn down with domestic trials, he went over to the Roman communion, in which he died.

The Rev. John Cosins Ogden rendered most valuable services to our infant Churches. A veteran churchman recollects his making a journey on foot from Portsmouth, New Hampshire, 100 miles, in order to visit them.

The Rev. Amos Pardee, a clergyman of worth and consistency of character, spent a few years among the Churches in the south west part of the Diocese. He left in 1801.

The writer is constrained, though with sorrow, to mention the names of two other individuals, who for a time bore no inconsiderable part among the friends of the Church—the Rev. James Nichols, who resided at Sandgate, and the Rev. Russell Catlin, who resided at Hartland. The former was a man of talents and eloquence; the latter possessed neither. It is painful to think of, and better not to describe, the latter days of either.

Such is a brief account of the Protestant Episcopal Church in the Diocese of Vermont down to the close of the last century. It might be said she dwelt in tents, for we cannot find, that she possessed a single finished temple. But we shall have the pleasure of witnessing a better state of things as we advance.

Before we proceed with our sketch, we think it proper to give some account of the landed estates granted for purposes connected with the Church. And not to recur to the subject again, we will throw together here all the particulars we think it important to give. With pleasure we acknowledge ourselves in this much indebted to the Rev. Mr. Bronson.

After the close of the French war and the establishment of peace on the Canadian frontier, Benning Wentworth, governor of New Hampshire, whose jurisdiction was supposed to cover the territory now known as the state of Vermont, caused a considerable portion of that territory to be surveyed out into townships. Each township being divided into seventy equal shares, the governor, in settling the terms

LANDS GRANTED FOR RELIGIOUS PURPOSES.

PROPAGATION RIGHTS.

of his charters with applicants and purchasers, reserved and granted three of such equal shares for religious purposes,—one for a glebe for the English Church,—one for the Society in England “for Propagating the Gospel in Foreign Parts,” and a third for the first settled minister, of whatever denomination he might be. One hundred and twenty five townships in all were thus granted. In only a single instance, Arlington, the first minister's share was taken up by an Episcopalian. Generally the shares were taken up by the Independents.

These lands, with the exception of the grants last mentioned, laid uncultivated many years. At length came to light a conspiracy. In the year 1786 the Trustees of Dartmouth College, with Dr. Wheelock at their head, conceived the design of getting possession of them for the purposes of education—or rather, for the purpose of advancing the interests of that seminary by identifying with them the interests of education in Vermont. It was proposed, by Dr. Wheelock, that the legislature should sequester for the use of Dartmouth College all those shares of land, which had been reserved in “the New Hampshire grants” for the Propagation Society and for Church glebes, under a stipulation for certain advantages to be enjoyed by Vermontese at that institution and at certain proposed academies. The subject was referred to the next session of the legislature. It came up—was committed—and there was the end of it.

The scheme of Dr. Wheelock seems to have turned the attention of the legislature for the first time to the lands in question. In October, 1787, an act was passed authorizing the selectmen of the several towns to take them under their care for the period of seven years, and to apply the incomes to the improvement of the same. This act was not attended to. The universal saying was, Why trouble ourselves with the care of other men's property?

This act expiring in 1794, the legislature passed another authorizing the towns to take in charge the glebes and to pay over the rents and profits to the several religious societies in the same, according to the number of families in each. In Manchester, where the Rev. Daniel Barber was then officiating, the constitutionality of this act was denied. A suit was commenced against Mr. Barber, then in occupancy of the glebe, in the Circuit Court of the United States, which in October, 1798, resulted in a decision, declaring the act of Vermont unconstitutional and void.

In 1802 the matter was again taken up in the legislature, but no measure was decided upon till 1805, when a law was passed to appropriate the glebe lands to the support of schools. This was carried into effect wherever there was no opposition. In Arlington, Manchester, Sandgate and Pawlet the Church still held possession. But in 1810, the Rev. Mr. Bronson having charge of the Church in Pawlet, that town brought an action against him and the tenants, which, after going through several terms of the Circuit court, was at length in 1815 decided against the Church.

By this decision the claim of the Church was declared to be void. The chief ground of the decision was, that the original purpose of the reservation did not take effect, because there was no party in existence to receive, and that the government of Vermont, succeeding to that of Great Britain, might resume and re-appropriate reservation at pleasure. Since this decision we have abandoned all expectation of deriving any benefit from this portion of the Church lands, which in future, without doubt, will be known only in the Church's history.

We turn to give some further account of the lands granted to the society in England for the propagation of the gospel in foreign parts—a venerable corporation chartered for missionary purposes by William III. nearly 140 years ago.

Dr. Williams states in his history of Vermont [1806] that “the society did not concern itself about its lands.” This is not correct; for before the revolutionary war it appointed agents in this country to look after them, of whom the Rev. Ranna Cossett was one. And these agents actually took possession in some cases and gave leases. In May, 1785, within two years after the treaty of peace, the society passed a resolution declaring its readiness to make conveyance, in any safe and suitable manner, of its property in this state for the benefit of the Church. A copy of this resolution was transmitted to churchmen in Vermont. Whereupon attention was eagerly turned to the devising of a plan, that might meet the society's approbation, but for a long time ineffectually.

Meanwhile the legislature, seeing the property left wild, passed an act in 1794, (at the same session with the glebe act,) to appropriate it to the use of schools. This measure was in most instances carried into immediate effect. Under this act have arisen all the difficulties, with which the Church has had to contend in relation to these grants. Feeble herself, she has had to contend against prejudice on

PROPAGATION RIGHTS—

RECOVERED BY THE SOCIETY.

the one hand, and against the authority and the treasury of the state on the other.

The friends of the Church took counsel of gentlemen eminent for legal learning, and the conclusion was, that the act of 1794 was unconstitutional and void; and that with patience and perseverance this could be substantiated before the proper tribunal. The subject was brought up in the Convention of 1805. The resolve of the venerable society, dated in May, 1785, before referred to, was hunted up and examined. The result was, a resolution directing the standing committee to take measures for procuring a conveyance.

The first plan, proposing a deed of trust, was unsatisfactory and unsuccessful. The friends of the Church were not discouraged; they were resolute and persevering men. And the writer, with great pleasure, avails himself of the opportunity to bear witness, both from personal knowledge and from documents that have passed under his eye, to the untiring and most useful labors of two individuals—the Rev. Abraham Bronson and Anson J. Sperry, Esq.

The next plan was, to move the venerable society for a simple power of attorney, which at length was successful. But in the mean time the embargo, non-intercourse, and war, put a stop to effective correspondence for years, though the business was not wholly neglected.

After the treaty of Ghent early in 1815, the Rev. Dr. Stewart, afterwards Bishop of Quebec, made a visit to Vermont, and in the kind and disinterested spirit which remarkably distinguished that excellent man, proposed to take charge of any communication, which the standing committee might think proper to address to the venerable society—of which he was both a member and a missionary—in further prosecution of their business. The papers were prepared with all possible despatch, signed and sealed in Convention at Arlington in the month of June, and forwarded to Dr. Stewart in Canada, who started immediately for London. In December next following the society passed a resolution to accede to the plan; but directed their secretary to require of the attorneys or agents to be appointed, a bond of indemnity against any costs that might arise in suits for the recovery of the lands. This occasioned another year's delay,—so that the instrument, with the authenticating affidavits and certificates, was not received till April, 1817. The attorneys appointed were, the Rt. Rev. Alexander Vietts Griswold, D. D., Bishop of the Eastern Diocese, the Rev. Abraham Bronson, the Rev. Silas S. Safford, the

Hon. Daniel Chipman, and Anson J. Sperry, Esq. "They were authorized," says Mr. Bronson, "to recover the lands and give durable leases; to assign such proportion of the rents as they should think proper to the support of a Bishop, and the remainder, after paying expenses, to the use of the Church in the Diocese as they should judge to be for its best interest."

The papers were placed in the hands of the Hon. Daniel Chipman, a gentleman of high reputation in the law, who undertook a thorough examination of the whole case in all its bearings and relations. In 1819, Mr. Chipman commenced a suit in the Circuit court of the United States against the town of New Haven in the county of Addison; for the defence in which the opposers of the Church obtained a grant of money from the state. This was decided in our favor. But the defendants carried it by a writ of error to the Supreme court of the United States, where, in March, 1823, the judgment of the court below was affirmed.

This, it might be supposed, would put an end to all anxiety and suspense, and open to the agents a direct road to an immediate and final adjustment of the whole business. But not so. In principle every point was gained; but opposition still found means and occasions to embarrass.

In a few weeks after this decision, a majority of the agents met at Middlebury and organized themselves as a body, with a secretary and a treasurer, and appointed sub-agents in different counties to ascertain and lease the lands. In the course of that year more than half the lands were recovered and leased. But the next year some resistance was made, by advice of counsel embittered against the Church, which led to a course of troublesome and most expensive litigation. The agents were obliged to send twice to England for testimony, and in two more suits to go to the Supreme court. But in 1830 and 1831, decisions were again made in our favor; again holding out a prospect, that the whole business would soon be settled. Further opposition, however, continued to be made from time to time on one pretence or another. Occupants had hopes of escaping somehow, till the Marshall looked them in the face. The agents received their *writ of seizure* in the last action undertaken by them, in October, 1841.

Since "the statute of limitation," passed with sole reference to this property, took effect, [1835] no suits have been commenced, though the constitutionality of this has been doubted on the ground of its conflicting with treaty. The agents

INCOME FROM THE PROPAGATION RIGHTS.

EASTERN DIOCESE FORMED.

have now taken possession of all these lands, except some trifling pieces overlooked by the sub-agents and not worth contending for.

Such is a condensed history of this most singularly protracted and expensive business. Perplexing as it has been to the managers, it issues in "a valuable consideration" to the Church. The gross annual income will not vary much from \$3000. To each parish in the Diocese sustaining and enjoying the full services of a Clergyman the Agents appropriate the sum of \$50,—to two or more parishes associated under one Clergyman, the same sum.

In 1831, on application of the Board of Agents in conjunction with the Convention of the Diocese, a new letter of attorney was received from the society, remodelling the Board in conformity to change of circumstances. As constituted by this instrument, it consisted of the gentlemen whose names follow:—The Rt. Rev. A. V. Griswold, D. D., the Rev. Abraham Bronson, the Hon. Daniel Chipman, the Rev. Carlton Chase, the Hon. Jonathan H. Hubbard, Dorastus Wooster, Esqr. and Jonathan Hagar, Esqr.—Again in the early part of 1839, on similar application, the Rt. Rev. John H. Hopkins, D. D., Bishop of the Diocese, and the Rev. William Henry Hoit, were substituted for Bishop Griswold and Mr. Bronson; the former of whom had ceased to have Episcopal charge in Vermont, and the latter had removed to Ohio. Such is the present Board, which for the transaction of its business meets annually on the first Tuesday in February.

For a time some of the friends of the Church feared, that the litigation attending the recovery of these lands would occasion prejudices sufficient to overbalance the benefits to be derived from them. But so it has not proved. To the extent of the writer's acquaintance there exists no hostility from this source, affecting the Church's progress.

We return to the more direct history of the Church.

Plans for the supplying of the Diocese with a Bishop failing—the General Convention, moreover, having enacted a Canon, that no Diocese should be considered competent to choose a Bishop without six officiating Presbyters—the subject was permitted to rest for several years. Owing to this privation and some other circumstances, the Church made very little progress and furnished but scanty materials for history in the first ten years of this century—the Rev. Mr. Bronson and the Rev. Mr. Chittenden

being the only clergymen, whose names appear on the journals of the convention, which was regularly held during that period.

In 1809, a plan was formed in the convention of Massachusetts to confederate the States of Massachusetts, Rhode Island, New Hampshire and Vermont, for the purpose of choosing a Bishop. This was communicated to churchmen in those States, with a request that if they approved, they would appoint delegates to attend a convention at Boston in the month of May the year following. The plan was universally approved. Mr. Bronson, being the only clergyman in this State, and no Convention at hand, immediately referred the subject to the Standing Committee, who were unanimously of the opinion, that great good must result from such a measure. On the 31st day of May, 1810, the Rev. Mr. Bronson, the Hon. Daniel Chipman of Middlebury, Doct. Samuel Cutler of Rockingham and John Whitlock, Esqr. of Castleton, with the Delegates from the other states contemplated, met at Boston and formed the Constitution of "The Eastern Diocese." By that Constitution it was provided, that the Convention of the confederacy should assemble biennially, and that each of the four States should be allowed a delegation consisting of four clergymen, and four laymen to be appointed by the Convention thereof.

Thus what was most anomalously called "The Eastern Diocese," was in fact a confederation of Dioceses, which might at any time fall to pieces and leave its Bishop without a Diocese. This view of the case was taken by the House of Bishops, when Dr. Griswold was presented to them for consecration. And accordingly they declined proceeding, until, in a conference with the Delegates from the States concerned, they were assured of that gentleman's having been elected by a Convention of the church in Massachusetts, and that so far as affected the church in other States the election was concurred in by their respective Conventions. All this, however, was merely oral; nor would so loose a way of doing business on so grave an occasion give satisfaction under the exact forms of the present day.

After the adoption of the Constitution, as mentioned above, the Convention proceeded to the election of a Bishop. The Rev. Mr. Griswold, a Presbyter of piety and respectability from Rhode Island, was put in nomination by the Rev. Dr. Gardiner of Boston. The nomination

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BISHOP HOPKINS ELECTED.

gave universal satisfaction, and the election lacked but one vote of perfect unanimity.

Thus happily transpired one of the most important events, which have occurred to the church in the Eastern States. Mr. Griswold at first declined the proffered crosier; but, at the urgent instance of brethren, he at length consented, and was consecrated with the great and good Hobart, in the city of New York, May 29, 1811.

From this time, the Church in Vermont began to advance. Bishop Griswold made a visitation within a month after his consecration; attended the State Convention, and administered Confirmation in several places. An impression was made on the minds of our people, which in due time brought into lively activity the slumbering energies of faith and hope. An improving state of piety was soon manifest in our few and feeble churches. The evident piety and meekness, and the earnest, affectionate simplicity of the Bishop inspired every one with joy and confidence. And it was the belief of all, that the Church was about to arise and receive a blessing under his ministrations. And thus truly it proved.

From the year 1811 to the year 1832, which was the period of Bishop Griswold's jurisdiction over the State, the church might be seen, in all her temporal and spiritual interests steadily progressive. Some new parishes were organized, many churches built and consecrated, and a zealous, devout and liberal spirit everywhere observable. "Believers were multiplied," and additions were constantly making to her communion. Her ministers, not numerous were well instructed, devout and faithful men, whose efforts were blessed to the conversion and edification and consolation of many. Her growth might have been more considerable but for that blighting and characteristic evil of the present day, the looseness of the bond between pastors and flocks—frequent disruptions and changes. The scantiness of the means within the reach of most parishes gave to many engagements the character of mere experiments, entered upon under a hope that by the blessing of God on the well directed labors of a popular pastor, something permanent might be the result. The same cause operated unfavorably in another respect, by making it necessary in many cases to divide the labors of a clergyman between two or more parishes.

In January, 1826, a monthly periodical entitled "The Episcopal Register," was

commenced at Middlebury. It was planned and conducted by the Rev. Benjamin B. Smith, then Rector of St. Stephen's Church, now Bishop of Kentucky, who was assisted in the supply of its columns by several of his brethren. During its continuance, four years, it contributed much to the encouragement and gratification of a spirit of inquiry and to the diffusion of information concerning the church. Its circulation never exceeded 500 copies. During its last year its columns were under the care of a pious and accomplished lady, assisted by some others of a similar character.

In May, 1832, we had thirteen officiating Presbyters, thirteen or fourteen consecrated churches, and twenty-four organized parishes. Measures had been taken in 1831 to effect a separation of this State from the Eastern Diocese. No objection being interposed by the Bishop or by the other members of the confederacy, the separation was consummated in the Convention at Middlebury, in May 1832. It had been the opinion of Bishop Griswold for several years before, frequently expressed by him in his annual addresses, that the Church in Vermont, since the acquisition of its lands, might safely undertake to support a Bishop by itself; and that, with the divine blessing, her progress would be much accelerated by such a step. In no degree were our people dissatisfied with a Chief Pastor, who had ministered among them to the best of his power, "yea, and beyond his power," for twenty one years. A Bishop was never more beloved—never listened to with more reverent regard. But it was not possible for one man to do all that was desirable in so extensive a jurisdiction. It was therefore resolved to separate. After passing a final resolution to this effect, an address was drawn up with expressions of the utmost respect, affection and gratitude, signed by every member of the Convention, Clerical and Lay, and transmitted to Bishop Griswold.

The next measure was the election of a Bishop. The provisions of the Constitution with respect to such a transaction were, that a nomination should be made by a majority of the clergy and approved by a majority of the laity, before any person could be declared to be elected. There were thirteen clerical ballots,—of these, seven were for the Rev. John Henry Hopkins, and six for the Rev. John S. Stone, both gentlemen belonging to the city of Boston. The former of course was announced as the nominee to the laity, who approved by a vote of thirty-one to nine. The parties amicably united in

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signing the testimonials of the Bishop elect. Thus was happily accomplished a measure, that in the anticipation had occasioned much solicitude. The next thing after securing his acceptance, which was in due time communicated to the standing committee, was to procure the consecration of our Bishop. This was done in General Convention in the city of New York the 31st day of October, 1832. In three weeks from this time Bishop Hopkins with his family took up his residence in Burlington, where he became Rector of St. Paul's, and where he has continued to the present time.

Bishop Hopkins has visited the churches in his Diocese once to each year. During the ten years of his Episcopate he has consecrated ten new churches—admitted twenty-one persons to the order of Deacons, and thirteen to the order of Priests. The whole number of persons confirmed by him during the same period is twelve hundred and four. The whole number of communicants in the Diocese does not vary much from fifteen hundred, allowance being made for scattered individuals not included in the Reports.

Episcopalians have taken an interest, much beyond what might be inferred from their pecuniary contributions, in the cause of missions both foreign and domestic. The Convention of 1834 passed a resolution recommending the General Domestic and Foreign Missionary Society of the Protestant Episcopal Church to the attention of the parishes in the Diocese. But to do much in this good work our parishes have been too feeble. Churchmen love the Missionary principle, and only differ sometimes with respect to the appropriate field of its operation.

The Convention of 1836, was one of great importance. It had been thought for many years, as experience extended and churches multiplied, that the Constitution and Canons of the Diocese were in some respects very imperfect, and needed a thorough revision. A Committee, at the head of which was the Bishop, appointed two years before, made an elaborate report to the Convention this year. The Constitution and Canons thus reported, after being considered and amended, were adopted by a unanimous vote. In these scarcely any change has yet been made.

From the time of his first entering the Diocese, it has been an object of much solicitude with Bishop Hopkins to establish a school for the instruction of candidates for Holy Orders. So essential has he considered it to the interests of religion in general and to the prosperity of the

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Church in particular, that he has submitted to very great sacrifices in order to accomplish the object, which, nevertheless, is far from being attained. How soon it will be attained it is impossible to foretell. Such candidates as have not the pecuniary means to carry them through a course of theological studies at the General Seminary in the city of New York, resort to the good old-fashioned way of private instruction with the pastors of churches. The Bishop has communicated to the Convention the fact, that there are funds in his hands, collected by him in England for a diocesan school, to the amount of \$3700; also, a valuable donation of theological books from the same source.

In all our parishes much attention is paid to the instruction of the young in Sunday Schools. It is a subject of constant and untiring attention among all our pastors; and has been so for more than twenty years. Some of our parishes have libraries of great and increasing value, which are doing much towards the general diffusion of knowledge both secular and religious—a knowledge of the constitution, discipline and worship of the Christian Church being, certainly, not a neglected department.

According to the journal of the last Convention there are, at this time, in the Diocese of Vermont twenty-four Clergymen, and 37 churches or parishes.*



St. Mary's Church, Burlington.

SECTION X.

Roman Catholic Church in Vermont.

BY REV. JEREMIAH O'CALLAGHAN.

Vermont could count but a few scattered Catholics within her borders until

* Circumstances, which it is not necessary here to mention, oblige us to transfer the remainder of the Rev. Dr. Chase's valuable contribution to the third

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the arrival of the first Catholic missionary, the Rev. Jeremiah O'Callaghan, in the year 1830. So great and rapid has been the tide of immigration since that period from Ireland and from the Canadas, that numerous congregations have already sprung up in several places, and although two additional missionaries, the Rev. John B. Daly and the Rev. William Ivers, are now employed in the state, they are hardly adequate to the wants of the population.

The largest congregation in the state has grown up in Burlington, where the first Catholic church was erected in 1833. This church was destroyed by fire on the 2d of May, 1838, but another more commodious edifice has been erected in a central part of the village during the present year, (1841) and was consecrated by the Rt. Rev. Benedict Fenwick, Bishop of the Diocese, on the 3d of October, 1841, by the name of St. Mary's Church.* It is of the Grecian order of architecture, is built of brick, 68 feet long, 48 wide and 36 high, with galleries on both sides and at the west end. The funds for its erection were contributed by the congregation, aided by the liberal donations of the native Americans, and by collections obtained in the neighboring cities. The *free* principle is here observed in the full sense of the word; respect of persons and the worldly terms, *mine* and *thine*, being excluded. The seats being common to all, the first comers select such as they choose. The Clergyman, having no salary or stipend, depends solely on the *free* will offerings made in the church three times a year—at Christmas, Easter and Summer, when four or five persons only offer \$2 each, 60 or 70, \$1 each, 15 fifty cents each, and the great body of the congregation give nothing excepting a few cents they may deposit in the collection box. To this may be added casual donations at marriages and christenings, which are optional to the donors.

Mr. O'Callaghan's congregation at Burlington is made up of the Catholics of this

part of our work. It consists of an interesting sketch of the history of the individual Episcopal churches in the state, and will be found under the names of the towns in which they are situated; of which the following is a list, viz: Burlington, Shelburne, Vergennes, Middlebury, Brandon, Rutland, Poultney, Wells, Tinmouth, Manchester, Arlington, Bennington, Guilford, Brattleboro, Bellows-Falls, Springfield, Windsor, Woodstock, Royalton, Bethel, Randolph, Montpelier, Derby, Montgomery, Berkshire, Enosburgh, Fairfield, Fairfax, Sheldon, Highgate, Alburgh and St. Albans.

* Another Roman Catholic church is now in the progress of erection on the site of the one destroyed by fire in 1838. It is designed for the accommodation of the French population, as St. Mary's is for the Irish.

and of five or six surrounding towns. He has also other flocks under his care—200 persons between Montpelier, Northfield and Moretown—200 in Underhill—and about 150 in Vergennes.

The Rev. Mr. Daly ministers to all the Catholics spread over the southern parts of the state. He has a flock of about 150 persons at Castleton, where a valuable lot was purchased in 1836, on which is a frame house, 30 by 18 feet, which is converted into a temporary chapel; a flock of 500 in Middlebury, where a handsome brick church, 64 by 44 feet, with a gallery at one end, was built in 1840; one of about 400 between Brandon, Pittsford, Rutland, Shrewsbury and Wallingford; one of 400 scattered through Woodstock, Plymouth, Windsor and Rockingham, and one of about 150 in Bennington.

The Rev. Mr. Ivers resides in St. Albans, with a flock of about one thousand, which congregate from that and the neighboring towns. It is in contemplation to erect a church, during the year 1842, in some central spot, for the accommodation of this congregation. He also has a flock of about 100 persons in Berkshire and vicinity; 100 in Troy, and one of about 80 in St. Johnsbury, Peacham and Danville.

This persuasion, with the exception of a few native converts, owes its astonishing increase to the annual swarms that cross the Atlantic from the mother hive. When they first arrive they are exposed to that prejudice and obloquy, which invariably attends a stranger in a foreign land; but the good sense and discrimination of the Americans soon discover them to be a sober, industrious and hard laboring people, who, having passed through the ordeal of persecution at home, come prepared to appreciate and sustain the free laws and institutions of our republic. The greater part of them have embarked upon the current of *Temperance*, and are most faithful observers of their pledge. Many of them have purchased farms in different parts of the state where they are doing well—are accumulating property—are becoming identified in manners, habits and interests with our native citizens, making an important addition to the population and strength of the country.

SECTION XI.

Fanatical Sects.

Dorritiles.—These were a sect of fanatics, which sprung up and flourished in Leyden, Massachusetts, in the years 1797 and 1798, and their society embraced some members who resided in the southern part

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DORRILITES.

PILGRIMS.

of Windham county in the State. The founder was an impostor by the name of Dorril, a refugee from the British army under Gen. Burgoyne. Dorril pretended to be possessed of supernatural powers, and that, as he was armed with attributes of Deity, it was not in the power of man to hurt him. He and his followers abstained from eating flesh; made use of neither food nor clothing, which was procured at the expense of life, and, if they had full faith in him, he assured them in the name of God, they should never die. They put off their leather shoes and had others made of cloth or wood. One was a blacksmith; he procured and used a pair of cloth bellows, and all lived upon milk and vegetables. They discarded all revelation except what Dorril received, set at defiance all the laws of man, and were governed in all their conduct, as they expressed it, "by the light of nature." Meetings were held once a week, at which their worship consisted in eating, drinking, singing, fiddling and dancing, and hearing lectures from Dorril, who was well qualified for that purpose. They had a covenant by which they placed a large share of their property in common stock, and the blacksmith became their treasurer. In a short time Dorril collected a large society, among whom were some very respectable families in the towns of Leyden and Barnardston, Massachusetts. People went from all the neighboring towns to hear and see the marvellous doings of Dorril and his associates. At length, at one of their meetings, a goodly number having assembled, Dorril opened with music, &c. and began to deliver his lecture. At that meeting one Captain Ezekiel Foster, of Leyden, attended as a spectator. He was a man of good sense, of a giant frame, and had a countenance that bespoke authority. When Dorril came to the doctrine of his mysterious powers, he had no sooner uttered the words, "no arm can hurt my flesh," than Foster rose indignant at his blasphemy, and knocked down Dorril with his fist. Dorril, affrighted and almost senseless, attempted to rise, when he received a second blow, at which he cried for mercy. Foster promised to forbear, on condition that he would renounce his doctrines; yet continued beating him. Soon a short parley ensued, when Dorril consented and did renounce his doctrines in the hearing of all his astonished followers. He further told them that his object was to see what fools he could make of mankind. His followers, chagrined and ashamed at being made the dupes of such a base fellow, departed in peace to their homes. Dorril

promised his adversary, upon the penalties of his life, never to impose upon the people more.

Pilgrims.—This was another vagabond sect which infested some parts of this State in the year 1817. Their leader was a man by the name of Isaac Bullard. He commenced his career at Ascot in Lower Canada, a long confinement by sickness having previously rendered him a visionary, or afforded him an opportunity to mature his plans for imposing upon the credulity of the ignorant and weak minded. He assumed the character of a prophet, wore a leathern girdle and rough garments to deceive, and with a few adherents entered the north part of the State, and proceeded southerly. Having received but few accessions to his number, when he reached Woodstock in Windsor county his whole company amounted to only eight persons. Here in a back and retired part of the town he found materials suited to his purpose, and soon succeeded in making proselytes of two simple, but well disposed and honest families by the name of Ball. One of these, Joseph Ball, was a Christian minister, and the other, Peter Ball, was the owner of a small farm with a large family. Having by deception and intimidation secured these to his interests, he made the residence of Peter Ball his head quarters for several months, in which time, by beguiling weak and unstable souls in that and the neighboring towns, he increased the number of his followers, consisting of men, women and children, to about 40, among whom was a Methodist minister by the name of Holmes, a resident in Shurburne.

Bullard professed to be governed and to govern by immediate inspiration from heaven, and he taught his followers to regard his authority as paramount to any other human or divine. The property of those who joined the company all went into the common stock, and was used or distributed according to the dictation of the *Prophet*, who also controlled at his will all their most intimate domestic relations, marrying and unmarried, rewarding and punishing, according to his sovereign pleasure; and none dared to resist his authority or lift a murmur of complaint. Filthiness they seemed to regard as a virtue; and they were frequently seen, even the adult females, rolling in the dirt of the highway, and presenting a spectacle as indecent and loathsome as can well be imagined.

Bullard himself said little when spectators were present, but the *tap* of his staff was well understood and instantly obeyed by his deluded followers. The

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NEW LIGHTS OR HOLY ROLLERS.

chief speaker among them was a fellow by the name of Cummings. He would sometimes attempt to defend their peculiarities by arguing with those whom curiosity had brought to them. At such times the *Prophet* would listen with stern and mute attention to the discussion, and whenever he discovered that his champion was likely to be worsted, he at once secured a victory by a peculiar tap of his staff, which instantly raised such a howling and groaning among his followers as put an effectual end to the argument.

After nearly exhausting their means of subsistence at Woodstock, they crossed the Green Mountains and stopped for a while in Bennington county. Here they received some accessions to their number and then proceeded to the west in quest of an unknown region which their leader designated as the "Promised Land." With a wagon to carry their baggage, they travelled on foot, procuring most of their subsistence by begging from house to house. When they reached a point on the Ohio river near Cincinnati their number was augmented to 2 or 3 hundred. There they sold their wagon, took boats, and proceeded down the river, and a more filthy, lousy squalid and miserable set of beings the world never saw. From this time their number rapidly diminished. Many died by sickness produced by hardship and privation, and others abandoned the company to avoid the same catastrophe. Their final stopping place was at New Madrid, 75 miles below the mouth of the Ohio. At this place Peter and Joseph Ball left them with the surviving members of their families, and from this time we have no knowledge of the movements or fate of the impostor, or those who adhered to him, but there can be little doubt that they miserably perished. Of those who went from Vermont a few begged their way back, but far the greater part were either ashamed, or too poor and feeble, to return.

New Lights.—This is a name assumed by a small band of fanatics, who commenced a brief career in the town of Hardwick in the early part of 1837. Their leader, whose name was Bridgeman, had been a professed Universalist, but having his mind discomposed by frequent attendance upon prayer meetings in his neighborhood, and becoming, as some thought, partially deranged, he professed to be inspired from on high, and was not long in enlisting several followers. They commenced their career by interrupting the regular exercises of the religious meetings of the neighborhood, by occasionally uttering in a tremendous sing-song scream

or yell, passages or parts of passages of scripture, pretending to act under the influence and guidance of the Holy Spirit. Soon they became the chief actors in the meetings, and such numbers began to be drawn together to hear and see the strange doings, that it was found inconvenient to hold their meetings in private houses, and they therefore held them for a while in a school house. But this proving too small for the multitudes who came together, they went into the *meeting house* in Hardwick, which had been built some years before by a private individual, with the nothing-arian motto, *Liberty of Conscience*, inscribed on its front. They also changed their time of holding meetings from the evening of a week day to the Sabbath; and there, Sabbath after Sabbath, for several months, the spacious house was crowded with a motly and tumultuous assemblage from that and the neighboring towns. The exercises consisted of the most ludicrous and foolish performances, such as frightful yellings, barking in imitation of dogs, foxes and cuckoos, jumping, swinging the arms and rolling on the floor. From this last circumstance they were sometimes called *holy rollers*. The leader in this *drollery*, as it was called, professed to have had it revealed to him that the men should not shave; they accordingly suffered their beards to grow for several months, and thereby acquired the appellation of the *long beards*. At length it was revealed to another of their number that they must all be shaved, and it was done.

Although no more than six or eight persons took a very active part in these meetings, still they were countenanced and encouraged by large numbers of the inhabitants of Hardwick and the neighboring towns. Many of these were ignorant and weak minded persons who were deluded and led astray, but the greater part were the idle and irreligious, who were better pleased to spend the Sabbath in attendance upon what was denominated the *Hardwick Theatre*, than with those who were engaged in rational religious worship. But, as happens to most fanatics, their career was short. The publication of a discourse, in the summer of 1838, leveled at their absurdities, by the late Rev. Chester Wright, at that time minister of Hardwick, and the imprisonment of some of their number for the disturbance of religious worship, soon put a stop to their *droll* meetings, and for the honor of our common nature, and of the state of Vermont, and of our holy religion, it is hoped that such disgraceful proceedings will not be repeated within our state.

CHAPTER X.

STATE OF SOCIETY.



SECTION I.

Original Inhabitants.

It was remarked in a preceding chapter that at the time of the first settlement of this continent by Europeans, and subsequently, canoes were in operation, which prevented the aborigines from making our territory, to any great extent, a permanent residence, and still there are indubitable proofs that they have, at some former period, resided here in considerable numbers. When the Coos country was first visited by the whites, large clearings were found upon the intervals overgrown by a kind of coarse grass, and there were various other indications of former extensive settlements by the natives. On the high grounds east of the mouth of Cow-Meadow brook, in Newbury, domestic implements of various kinds, of Indian manufacture, were formerly found in such numbers as to afford conclusive proof of its having been the site of a considerable Indian village. On the meadow, a short distance below was their burying ground, where the ashes of many of the sons of the forest now lie. They were buried in the sitting posture, peculiar to the Indians, and their bones have been frequently

turned up by the plough. On the Ox-Bow, the remains of an Indian fort were still visible, when the first settlers came to Newbury. The mound forming its circumference, was, at that time, overgrown with trees five or six inches in diameter, and the ground in the vicinity is overgrown with a profusion of white flint stones and arrow heads.*

The Indians, who resided along the upper parts of Connecticut river, were a branch of the Abenaki tribe, whose chief location, in modern times, has been at St. Francis. There was always an intimate connexion between them and the Indians at St. Francis, and they have been commonly spoken of, by American writers, as St. Francis Indians; and yet they had the distinguishing appellation of *Coosucks*, which is descriptive of the country where they resided. *Coos*, in the Abenaki language signified *the pines*, and this name was applied by the Indians to two sections of country upon Connecticut river, one above the fifteen mile falls, about Lunenburg, and the other below, about Newbury, on account of the great abundance of white pine timber in those places; and the termination, *suck*, signified *river*, so that *Coos-suck*, signified *the river at the pines*.

The Coosucks and St. Francis Indians, who always acted on the part of the French in the wars between the French and English colonies, were for many years the most blood-thirsty and cruel enemies, which the frontier settlements of New England had to encounter. But the desperate battle, fought in 1725, between Capt. Lovewell with 46 men, and about twice that number of Indians, in which the latter were beaten, and Paugus, their chief, together with a large number of their warriors, was slain, struck such terror to the Coosucks that they mostly retired into Canada and became identified with their kindred at St. Francis.

After the conquest of Canada by the English, several Indian families returned to Coos and remained until they became extinct. Among these were two Indians

*See the communication of David Johnson, Esq. in the Historical sketches of the Coos country, by the Rev. Grant Powers, page 30.

CAPT. JOHN AND CAPT. JOE.

LAKE CHAMPLAIN INDIANS.

of some notoriety, who were known as *Capt. John* and *Capt. Joe*. John was in the battle in which Braddock was defeated. He used to relate that he was knocked down by a British officer whom he afterwards shot, and that he tried to shoot young Washington, but could not hit him. When under the excitement of strong drink, he exulted in the relation of his former deeds of barbarity, among which he told how he mutilated a woman taken at Fort Dummer, by cutting off her breasts, and would imitate her shrieks and cries of distress. He was fierce and cruel and a great terror to the children about Newbury as long as he lived. He had a Captain's commission during the revolution, and, at the head of a party of Indians was attached to the American army, which captured Burgoyne.

Capt. Joe was born in Nova Scotia, but upon the overthrow of the eastern Indians, he while quite young went to St. Francis. His wife was called *Molly*, and she had two sons by a former husband, who came with them to Coos. Their names were Toomalek and Mauxa Wuxal. There was nothing remarkable in the character of Mauxa Wuxal, but Toomalek had a murderous disposition. As he grew up he became enamored of a young squaw by the name of *Lewá*, but Mitchel another Indian was his rival and married her. Toomalek determined to murder Mitchel and take his wife. Watching his opportunity, he discovered the happy pair sitting by their fire in the evening, at the Ox-Bow. He aimed his gun at Mitchel, but *Lewá* received the ball and expired that evening. Toomalek was tried for the murder by his Indian peers, and was acquitted on the ground that he did not mean to kill *Lewá* but Mitchel. Toomalek was still resolved to kill Mitchel; and having got him partially drunk by treating him freely, while he himself remained sober, he then provoked Mitchel to draw his knife and attack him, upon which Toomalek drew his knife and despatched Mitchel on the spot. For this crime he was also tried and acquitted on the ground that he was acting in self-defence. After this Toomalek at the instigation, as was supposed, of a young squaw, murdered Pi-al, son of Capt. John above mentioned. For this crime he was tried and sentenced to be shot, and Capt. John was to be the executioner. Toomalek came unguarded to the place of execution, where John stood in readiness, and, having seated himself, repeated his prayers, and covered his face, he said "*Muck bence*"—kill me quick, upon which John shot him through the head and he died instantly.

Joe was mild and inoffensive in his disposition and used to boast that he had "never pointed a gun" at a man. He had a strong antipathy to the English, who had killed his friends in Nova Scotia, and, during the Revolution, was a warm friend to the American cause. He and Molly once visited and shook hands with Gen. Washington at his head quarters, on the North river, and ate at the General's table after the officers had dined. After the war, such was his dislike to the King of England, that he would never enter his dominions, though strongly urged by the Indians to return to St. Francis. Having followed a Moose two days, and finding at length that it had crossed the line into Canada, he stopped short, said "Good bye Mr. Moose," relinquished the pursuit and returned. He spent his time principally in hunting through all the north-eastern parts of the state, and many anecdotes are related respecting his encounters with the wild beasts of the forest. Joe survived Molly many years, and they have each a pond called by their names in the town of Cabot. When Joe became old and unable to support himself, the legislature of Vermont granted him an annual pension of \$70 a year. He died at Newbury, February 19, 1819, aged about 80 years, and with him fell the last of the Coossucks.*

The country about Lake Champlain seems to have been long claimed both by the Iroquois and the Canada Indians, and it was a favorite hunting ground for both long after settlements were commenced on the continent by the French and English. That the Indians were numerous here at some earlier period, we have reason to believe, both from the suitability of the location to their mode of life, and from the numerous relics which are met with in various places. Arrow and spear heads are found scattered through this whole region, and on Grand Isle are indications that these articles were manufactured there to a large amount. Fragments of the stone from which they were made and broken, or partly finished, arrow or spear heads are scattered in profusion over a considerable extent. The stone, from which they were made, must have been brought from a distance, as none of the kind, excepting these fragments, is found on the Island. Burial grounds of the natives are also found and various places containing many bones, and implements for the purposes of war and domestic use are not uncommon.

*His gun was found loaded and was discharged over his grave. His snow shoes are in possession of Mr. Frye Bailey.—*Power's History of Coos.*

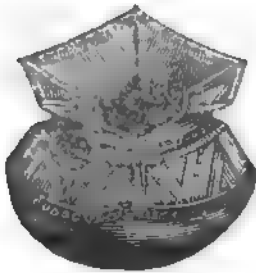
INDIAN RELICS.

URNS, AXES, GOUGES, AND ARROWS.

men. This view is corroborated by the statement of Champlain. In his journal of his first visit to this lake in 1609, he says expressly that here the country was formerly inhabited, but was at that time to a great extent abandoned on account of the continued wars.

When Mrs. Howe and others were taken at Bridgman's fort and carried into captivity, in 1755, the northern parts of Lake Champlain were in possession of the St. Francis Indians, who wintered there in large numbers and subsisted by hunting and fishing; and as late as the time of the revolutionary war, a branch of this tribe had a village at Swanton, consisting of about 50 huts with a church, jesuit missionary, and some lands under cultivation. About the year 1798, the Caughnawagha Indians advanced a claim to most of the lands lying between Lake Champlain and the Green Mountains, and importuned the legislature of Vermont at several sessions for remuneration for the same, but without success.*

Indian relics. These consist principally of pots or urns, mortars and pestles, axes, chisels, gouges, arrow and spear heads, and some other implements the use of which is not now known. The most interesting of these are the pots or urns, which appear to be made and baked in the manner of our common earthen or stone ware. These have been found at several different places, and of sizes varying from one quart to 5 or 6 gallons. One was dug up in Middlebury in 1820, nearly entire and of the capacity of about 20 quarts. The urn, of which the following



is a figure, was found in Colchester in 1825, by Captain John Johnson, and in 1827 was presented by Luther Loomis, Esq. to the College of Natural History in the University of Vermont, and is now preserved in the society's collections.—It is about eight inches in height, and, through the largest part, about nine inches in diameter, and would hold about four

*See part second, page 59.

quarts. The bottom, up to the middle of the bilge, is hemispherical and plain. Above, it is compressed so as to become four sided; but the sides are a little convex, and ornamented with various lines and checks. It is considerably contracted at the neck with a deep groove, as if designed for putting round a cord or with by which it might be suspended. Above the groove, it enlarges and spreads outward, becoming nearly square at the top, and measuring just six inches from angle to angle on each side. Along the groove, on the angles and around the bilge, it is ornamented with rows of small circles. One of the corners is broken off, as shown in the figure, and the bottom exhibits evident indications of having been used over fire. It appears to be composed of pulverized granite and clay, numerous particles of feldspar and mica being seen in its composition. It is unglazed, but very compact and smooth, except where roughened by the ornaments. Its antiquity is shown to be great by the circumstances in which it was found, it being covered with a flat stone, over which a large tree had grown, and had been so long dead as to be nearly all rotten. A similar vessel, but much larger, was found many years ago in Bolton, and is now in the possession of John N. Pomeroy, Esq. of Burlington.

The following, among other implements of Indian manufacture, all of stone, are occasionally picked up.



The axes vary from half a pound to five or six pounds.



The gouges are sometimes grooved through the whole length, which is generally from 8 to 12 inches.



The arrow points are from one to five inches long.

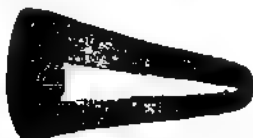
INDIAN RELICS.

MICROGLYPHICS AND MAIL.

POPULATION.

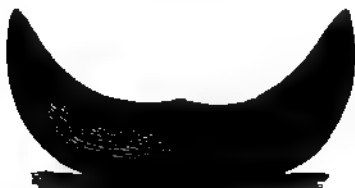


The *spear points* are from four to eight inches long, and two or three inches wide.



The *chisels* vary much in size and form, but are usually from 6 to 12 inches in length.

Various other articles are found, of several of which the use is not known. One of these last is represented by the figure below :



It is made of a kind of a gray stone, and is about 10 inches long. It was found in Burlington, half a mile south of the village, and was presented to the College of Natural History of the University of Vermont, by Mr. Lewis Olmsted.



Indian Hieroglyphics.—The only things of this kind, which have attracted any notice, are upon a rock at the side of a cove near the mouth of West river in Brattleborough, and are little more than rude scratches representing birds and some other animals. Whether these figures are real hieroglyphics or were made by

the rude natives merely for amusement, while fishing, or watching for water fowl at this place, is unknown. To give the reader an idea of what these figures are, we have procured a copy of one which evidently represents a fish hawk bearing off his prey, as will be seen by the cut which precedes this paragraph.

Shirt of Mail.—This curious relic, which is doubtless of European origin, was found in Irasburgh, in the spring of 1837, by Mr. Shubael Goodell. It was rolled together and lying at the foot of a large birch tree between two considerable roots, and when discovered was much corroded by rust upon the outside. It was found, upon unrolling it, to be made of iron, or steel rings about one fourth of an inch in diameter, locked together in the manner in which wire purses are sometimes made, but much thicker. The wire, of which the rings were made, was nearly as large as a common knitting pin, and in forming the rings the ends of the wire instead of being brazed in the usual way, were firmly riveted. The form of the article was that of the body of a shirt, reaching down a little below the hips, with sleeves barely sufficient to protect the shoulders, and a collar covering the whole neck. The collar was of several thicknesses, made, in the manner above described, of brass or gilt wire, and there was a border of the same kind of wire around the bottom of the garment. The collar was open before, sufficiently for passing the head through, but, when on, could be snugly closed and fastened about the neck. It was evidently designed to protect the body of the wearer against arrows, spears and other weapons, but when, or by whom, it was left in the place where it was found, we have no means of determining; its corroded condition, however, showed that it had lain there for a great number of years. It was purchased soon after it was found, by Lieut. Wilson of the U. S. artillery, for the purpose of being deposited in the museum of the National Institute at Washington.

SECTION II.

Population.

There was no complete census of Vermont till after her admission into the Union in 1791.* Since that time there have been six complete enumerations under the direction of Congress, the results of which we have, for the convenience of comparison, collected in the following table.

* See part second, pages 16 and 19.

POPULATION BY TOWNS—

ALPHABETICALLY ARRANGED.

Towns.	1791.	1800.	1810	1820.	1830.	1840.	Towns.	1791.	1800.	1810.	1820.	1830.	1840.
Acton		131	245	204	176	*	Duxbury	39	153	326	440	652	820
Addison	401	734	1100	1210	1306	1229	EastHaven						79
Albany		12	101	253	683	920	Eden		29	224	201	461	702
Alburgh	446	750	1106	1172	1239	1344	Elmore	12	45	157	157	442	476
Andover		622	957	1000	975	878	Enosburgh		143	704	932	1560	2022
Arlington	991	1597	1463	1354	1207	1035	Essex	354	729	957	1089	1664	1824
Athens	450	459	478	507	415	378	Fairfax	354	787	1301	1359	1729	1919
Averill					1	11	Fairfield	129	901	1618	1573	2270	2448
Avery'sGr†				11	22	35	Fair Haven	375	411	645	714	675	633
Bakersfield	13	222	812	945	1087	1258	Fairlee	232	386	983	1143	656	644
Baltimore	275	174	207	204	179	155	Fayston		18	149	253	458	635
Barnard	673	1236	1648	1691	1881	1774	Ferdinand						
Barnet	477	858	1301	1488	1764	2030	Ferrisburg'	481	956	1647	1581	1822	1755
Barre	76	919	1669	1955	2012	2126	Fletcher	47	209	382	497	793	1014
Barton		128	447	372	726	892	Franklin	46	280	714	631	1129	1410
Belvidere			217	198	185	207	Georgia	340	1068	1760	1703	1897	2106
Benningt'n	2377	2243	2524	2485	3419	3429	Glastenb'y	34	48	76	48	52	53
Benson	658	1159	1561	1481	1493	1403	Glover		36	387	549	902	1119
Berkshire		172	918	831	1308	1818	Goshen		4	86	290	555	621
Berlin	134	684	1067	1455	1664	1598	Grafton	561	1149	1365	1482	1439	1326
Bethel	473	913	1041	1318	1667	1886	Granby		69	120	49	97	105
Bloomfield		27	144	132	150	179	Grand Isle	337	1289	623	898	648	724
Bolton	88	219	249	306	452	470	Granville	101	185	324	328	403	545
Bradford	654	1064	1302	1411	1507	1655	Greensboro	19	280	566	625	784	883
Bradly vale					21	350	Groton	45	248	449	595	836	928
Braintree	221	531	850	1033	1209	1332	Guildhall	158	296	544	529	481	470
Brandon	637	1076	1375	1495	1946	2194	Guilford	2432	2256	1872	1862	1760	1525
Brattleboro	1589	1867	1891	2017	2141	2623	Halifax	1309	1600	1758	1567	1562	1399
Bridgwater	293	781	1125	1125	1311	1363	Hancock	56	149	311	442	472	455
Bridport	449	1124	1520	1511	1774	1480	Hardwick	3	260	735	867	1216	1354
Brighton					105	157	Hartford	988	1494	1881	2010	2044	2194
Bristol	211	665	1179	1051	1274	1233	Hartland	1652	1960	2352	2553	2503	2341
Brookfield	421	988	1384	1507	1677	1789	Highgate	103	437	1374	1250	2038	2292
Brookline		472	431	391	376	328	Hinesburg'	454	933	1238	1332	1669	1682
Brownint'n		65	236	265	412	486	Holland			128	100	422	605
Brunswick	66	86	143	124	160	130	Hubbardt'n	404	641	724	810	865	719
Burke		108	460	541	866	997	Huntington	167	405	514	732	929	914
Burlington	332	815	1690	2111	3226	4271	Hydepark	43	110	261	373	823	1080
Cabot	122	349	886	1032	1304	1440	Ira	312	473	519	498	442	430
Calais	45	443	841	1111	1539	1079	Irasburgh		15	292	432	860	971
Cambridge	359	733	990	1176	1613	1790	IslelaMotte	47	135	338	312		435
Canaan	19	74	332	227	373	378	Jamaica	263	582	996	1313	1553	1586
Castleton	800	1039	1420	1541	1783	1769	Jay				52	196	308
Cavendish	491	921	1295	1551	1498	1427	Jericho	381	728	1185	1219	1654	1684
Charleston			56	90	564	731	Johnson	93	255	494	778	1079	1410
Charlotte	635	1231	1679	1526	1702	1620	Kirby		20	311	312	401	520
Chelsea	239	897	1327	1462	1958	1959	Landgrove	31	147	299	341	355	345
Chester	981	1878	2370	2493	2320	2305	Leicester	343	522	609	548	638	602
Chittenden	159	327	446	528	610	644	Lemington	31	52	132	139	183	124
Clarendon	1478	1789	1797	1712	1585	1549	Lewis						
Colchester	137	347	657	960	1489	1739	Lincoln		97	255	278	639	770
Concord	49	322	677	806	1031	1024	Londond'y	362	330	637	958	1302	1216
Corinth	578	1410	1876	1907	1953	1976	Ludlow	179	410	877	1144	1227	1363
Cornwall	826	1163	1270	1120	1264	1163	Lunenburg	119	393	714	856	1054	1130
Craftsbury	18	229	566	605	982	1151	Lyndon	59	542	1090	1296	1822	1753
Danby	1206	1457	1730	1607	1362	1379	Maidstone	125	152	177	166	236	271
Danville	574	1514	2240	2300	2631	2633	Manchest'r	1276	1397	1502	1508	1525	1590
Derby		178	714	925	1469	1681	Mansfield		12	38	60	279	223
Dorset	958	1286	1294	1359	1507	1432	Marlboro'	629	1087	1245	1296	1218	1027
Dover			859	829	831	729	Marshfield		172	513	710	1271	1156
Dummerston	1501	1692	1704	1658	1592	1263	Mendon	34	39	111	174	432	545
							Middlebury	395	1263	2138	2535	3468	3161

* Now part of Townshend. † In Franklin county

POPULATION BY TOWNS—

ALPHABETICALLY ARRANGED.

Towns.	1791.	1800.	1810.	1820.	1830.	1840.	Towns.	1791.	1800.	1810.	1820.	1830.	1840.
Middlesex	60	262	401	726	1156	1279	South Hero	337	1289	826	842	717	664
Middleto'n	699	1066	1207	1039	919	1057	Springfield	1097	2032	2556	2702	2749	2625
Milton	282	786	1548	1746	2100	2136	St. Albans	256	901	1609	1636	2315	2702
Monkton	450	880	1248	1152	1384	1310	Stamford	272	383	378	490	563	662
Montgom'y		36	237	293	460	548	Starksboro'	40	359	726	914	1342	1263
Monroe		23	254	432	824	1092	Sterling		9	122	181	183	193
Montpelier	113	890	1877	2308	2985	3725	St. George	57	65	28	120	135	121
Moretown	24	191	405	593	806	1128	St. Johnsb'y	143	663	1334	1404	1592	1887
Morgan			135	116	231	422	Stockbridge	100	432	700	964	1333	1419
Morrist'wn	10	144	550	726	1315	1502	Stow		316	650	957	1570	1371
Mt. Holly		668	922	1157	1318	1356	Stratford	845	1642	1805	1921	1935	1761
Mt. Tabor	165	153	209	222	210	226	Stratton	95	271	265	272	312	341
Newark		8	88	154	257	360	Sudbury	258	521	754	809	812	796
Newbury	873	1304	1363	1623	2225	2579	Sund'land	414	557	576	496	463	437
Newfane	660	1000	1276	1506	1441	1043	Sutton		144	433	697	1005	1068
Newhaven	723	1135	1688	1566	1834	1503	Swanton	74	858	1657	1607	2158	2313
Newport		50	28	52	284	591	Thetford	862	1478	1785	1915	2113	2065
Northfield	40	204	426	690	1412	2013	Tinmouth	935	973	1001	1069	1049	781
North Hero	125	324	552	503	638	716	Topsham	162	344	814	1020	1384	1745
Norton							Townsend	676	1083	1115	1406	1386	1345
Norwich	1158	1486	1812	1985	2316	2218	Troy			281	227	606	856
Orleans		7	178	282	729	796	Tunbridge	487	1324	1640	2003	1920	1811
Orange		348	686	751	1016	984	Underhill	65	212	490	633	1052	1441
Orwell	778	1376	1849	1730	1598	1504	Vergennes	201	516	835	817	999	1017
Panton	220	363	529	548	605	670	Vernon	482	480	521	627	681	705
Pawlet	1458	1938	2233	2155	1965	1748	Vershire	439	1031	1311	1290	1260	1998
Peacham	365	873	1301	1294	1351	1443	Victory					53	140
Peru	71	130	239	314	455	578	Waitsfield	61	473	647	935	958	1048
Pittsfield	49	164	338	453	505	615	Walden	43	153	455	580	827	913
Pittsford	850	1413	1936	1916	2005	1927	Wallingf'd	536	912	1386	1570	1740	1608
Plainfield		256	543	660	874	880	Waltham	201	247	244	264	301	283
Plymouth	106	497	834	1112	1237	1417	Wardsboro	753	1484	1159	1016	1148	1102
Pomfret	710	1106	1433	1635	1867	1774	Warren		58	229	320	766	943
Poultney	1121	1694	1905	1955	1909	1880	Washing'n	72	500	1040	1160	1374	1359
Pownal	1746	1692	1655	1812	1835	1613	Waterbury	93	644	966	1269	1650	1192
Putney	1848	1574	1607	1547	1510	1382	Waterford	63	565	1289	1247	1358	1388
Randolph	892	1841	2255	2487	2743	2678	Waterville	15	51	193	273	488	610
Reading	747	1120	1565	1603	1409	1363	Weathersf'd	1146	1944	2115	2301	2213	2002
Readsboro'	64	234	410	530	662	767	Wells	622	978	1040	986	880	740
Richford		13	440	440	704	914	Wenlock					24	28
Richmond		718	935	1014	1109	1054	West Fairle	463	391	983	1143	841	824
Ripton				42	278	357	Westfield		16	149	225	353	370
Rochester	215	524	911	1148	1392	1396	Westford	63	648	1107	1025	1290	1352
Rocking'm	1235	1684	1954	2155	2272	2330	Westhaven	545	430	674	684	724	774
Roxbury	14	113	361	512	737	784	Westminster	1601	1942	1925	1974	1737	1546
Royalton	748	1501	1753	1816	1893	1917	Westmore					32	122
Rupert	1033	1648	1630	1332	1318	1091	Weston		17	629	890	972	1032
Rutland	1407	2125	2379	2369	2753	2708	Weybridge	175	502	750	714	850	797
Ryegate	187	406	812	994	1119	1222	Wheelock	33	568	964	906	834	881
Salem		16	58	80	230	299	Whiting	250	404	565	609	653	660
Salisbury	446	644	709	721	907	942	Whitingham	442	868	1248	1397	1477	1391
Sandgate	773	1020	1187	1185	933	777	Williamst'wn	146	839	1353	1481	1487	1620
Searsboro'				9	40	120	Williston	471	836	1185	1246	1608	1554
Shaftsbury	1999	1895	1973	2022	2143	1835	Wilmington	645	1011	1193	1369	1367	1296
Sharon	569	1158	1363	1431	1459	1371	Windham		429	782	931	847	757
Sheffield		170	388	581	720	821	Windsor	1542	2211	2757	2956	3134	2744
Shelburne	389	723	987	936	1123	1089	Winhall	155	212	429	428	571	576
Sheldon	110	408	883	927	1427	1734	Wolcott	32	47	124	123	492	824
Sherburne	32	90	116	154	452	498	Woodford	60	138	254	212	395	487
Shoreham	721	1447	2033	1881	2137	1675	Woodstock	1605	2132	2672	2610	3044	3315
Shrewsbury	383	748	990	1149	1289	1218	Worcester		25	41	44	432	587
Somerset	111	130	199	173	245	262							

Whole number of towns in the State, 245.

POPULATION BY COUNTIES.

CENSUS OF 1840.

The following table contains the population of the state by counties at the several enumerations; or, rather, since some of the counties are of recent formation, it exhibits the population of the several portions of the state now embraced in the respective counties, together with the increase between the several censuses. The sign — before several numbers in the last column, denotes that those counties diminished in population between 1830 and 1840:

COUNTIES.	1791.	1800.	1810.	1820.	1830.	1840.	1850.	1860.	1870.	1880.	1890.	1900.	1910.	1920.	1930.	1940.	1950.
Addison,	6,489	13,417	12,923	20,463	21,140	23,503		6,928	4,711	4,711	4,711	4,711	4,711	4,711	4,711	4,711	4,711
Bennington,	12,254	14,617	13,892	16,125	17,470	16,979		2,363	1,276	2,223	1,345	1,345	1,345	1,345	1,345	1,345	1,345
Chittenden,	3,918	9,551	14,646	15,965	21,496	22,979		5,633	5,095	1,349	5,501	1,482	1,482	1,482	1,482	1,482	1,482
Caledonia,	2,047	7,544	14,964	16,563	20,477	21,821		5,519	7,400	1,703	4,294	924	4,294	924	4,294	924	4,294
Essex,	567	1,473	3,164	3,164	3,964	4,226		912	1,608	247	647	245	647	245	647	245	647
Franklin,	1,472	6,531	14,411	14,856	20,977	24,532		5,052	7,877	476	6,091	3,555	6,091	3,555	6,091	3,555	6,091
Grand Isle,	1,155	2,408	3,447	3,527	3,676	3,883		1,343	947	89	168	187	168	187	168	187	168
Lamoille,	564	1,751	4,021	4,903	8,965	10,328		1,187	2,270	892	4,062	1,423	4,062	1,423	4,062	1,423	4,062
Orange,	7,334	16,311	21,724	24,169	27,285	27,854		8,948	5,406	2,445	5,406	598	5,406	598	5,406	598	5,406
Orleans,	34	1,054	1,512	5,376	16,895	14,434		1,020	3,458	894	5,493	2,745	5,493	2,745	5,493	2,745	5,493
Rutland,	15,565	23,813	21,457	21,475	31,275	30,701		8,248	5,674	494	1,380	504	1,380	504	1,380	504	1,380
Washington,	629	3,345	6,382	13,611	14,345	20,706		4,643	3,170	4,229	5,772	4,123	4,229	5,772	4,123	4,229	5,772
Windham,	17,593	23,781	26,760	28,477	27,745	27,431		5,898	3,170	1,607	2,801	1,317	1,607	2,801	1,317	1,607	2,801
Windsor,	15,748	26,944	31,577	31,233	40,923	40,359		11,196	7,938	3,357	2,390	964	3,357	2,390	964	3,357	2,390
Total,	86,539	134,463	1217,204	1235,749	1269,715	1291,1850		68,880	62,739	18,545	44,966	11,145	44,966	11,145	44,966	11,145	44,966

According to the returns of the census of 1840, the aggregate population of the state was 291,860, and their classification by ages, occupations, &c., is exhibited in the following tables.

FREE WHITE PERSONS.

	Males	Females.
Under 5 years of age,	21,796	20,379
Of 5 and under 10,	19,069	17,777
Of 10 and under 15,	17,551	16,677
Of 15 and under 20,	16,991	15,744
Of 20 and under 30,	23,006	24,225
Of 30 and under 40,	17,596,	18,163
Of 40 and under 50,	12,817	12,807
Of 50 and under 60,	7,992	8,612
Of 60 and under 70,	5,454	5,423
Of 70 and under 80,	3,137	2,875
Of 80 and under 90,	884	951
Of 90 and under 100,	84	100
Of 100 and upwards,	13	7
Total,	146,378	144,840

FREE COLORED PERSONS.

	Males.	Females.
Under 10 years of age,	91	76
Of 10 and under 24,	99	106
Of 24 and under 36,	74	65
Of 36 and under 55,	60	76
Of 55 and under 100,	38	43
Of 100 and upwards,	2	0
Total.	364	366

Included in the foregoing are the following

White persons, deaf and dumb under 14,	27
" " " from 14 to 25,	19
" " " over 25,	8
Colored persons, deaf and dumb,	2
White persons who are blind,	161
Colored persons who are blind,	2
White persons, insane & idiots at pub. charge,	144
Colored persons, " "	4
White pers., insane & idiots, at priv. charge,	254
Colored persons, " "	2
Persons employed in mining,	77
Persons employed in agriculture,	73,180
Persons employed in Commerce,	1,303
" in manufactures and trades,	13,174
" in navigation of the ocean,	41
" in nav. canals, lakes, & rivers,	144
" in the learned professions,	1,563
Pensioners for revolutionary or military ser.	1,380
Universities or Colleges,	5
Students in Universities or Colleges,	' 253
Academies and grammar schools,	46
Students in academies & grammar schools,	4,113
Primary and common schools,	2,402
Scholars in Primary schools,	97,618
White persons over 20 years of age who cannot read and write	2,270

SECTION III.

Character and Employments of the People.

The first civilized inhabitants of Vermont were emigrants from the older parts

CHARACTER OF THE PEOPLE.

FEMALE SEX.

of New England, and were almost wholly of English or Scotch descent. At the time the settlement was commenced, this whole tract of country was covered by an immense unbroken forest, inhabited only by wild beasts, and traversed by merciless Indians, some of whom had their lodges upon the upper parts of Connecticut river and on the shores and islands of lake Champlain. It could not, therefore, be expected that any but the most bold and enterprising, would venture to expose themselves to the dangers and hardships of establishing themselves here; and as these were, for the most part, men of small fortunes and large families, the labor required in subduing the forests, cultivating the soil and providing the means of subsistence, left them little leisure for the improvement of their minds, or the refinement of their manners. Hence, as might be expected, their characters partook much of the boldness and roughness of the mountain and forest scenery, in the midst of which they resided. Being compelled, on account of their exposed situation, to face dangers of various kinds, and being accustomed to remove obstacles and surmount difficulties by their personal exertions, they soon acquired unlimited confidence in their own abilities, and imbibed the loftiest notions of liberty and independence. These traits of their general character were fully displayed during those vexatious and perplexing controversies in which they were, for twenty seven years, constantly involved, and they have at all subsequent periods, marked their proceedings in the council and in the field.

Though the fathers of Vermont were not liberally educated, most of them had shared in the benefits of that excellent system of common school education for which New England has always been distinguished; and though not learned, few of them were wholly illiterate. Nearly all of them were able to read and to write a fair hand, and were sufficiently acquainted with the common rules of arithmetic to become correct accountants. Few of them were versed in the rules of grammar, but they all had sufficient knowledge of their mother tongue to be able to make their *meaning* understood, and many there were among them, who could wield with effect, either the *quill*, or the sword, or the axe, as circumstances required. The writings of these men,—their first attempts at legislation, and various other memorials, which have been handed down to us, afford conclusive proof of the possession of intellect and talent of a high order. But they were like the marble from the quarry, roughly hewn, which exhibits the

strength and value of the material, but in which the delicate veins and colors and shades have not been brought out and exhibited in all their pleasing variety by the skill of the polisher.

Among the inhabitants of this state, an equality in point of rank and property and a sense of mutual dependence, have very generally prevailed, which have been highly favorable to the exercise of the social virtues and the friendly feelings of the heart. The Vermonters have hitherto been distinguished for their kindness among themselves—for their attention and hospitality to strangers, and for their benevolence to the suffering and needy, both at home and abroad; and it is to be lamented, and, we fear, without being remedied, that the growing inequalities and distinctions of rank and property, are beginning to throw a chill over those gushing feelings of philanthropy, which warmed the hearts, animated the countenances and blended the sympathies of the earlier inhabitants of our land.

The female sex in Vermont may be recommended as patterns of industry and economy. They are nearly all habituated to household labors from their childhood, and they in general pride themselves much on account of their neatness and the management of their domestic affairs. They are accustomed to regard the family as the sphere which they are more particularly designed to occupy, and here they usually appear to the best advantage. In common with the other sex, they are all permitted to share in the benefits of common school instruction, but, till recently, very few have had an opportunity to extend their education to the polite accomplishments; and it is pleasing to observe, that parents now are not generally disposed to indulge their daughters in the pursuit of the ornamental, to the neglect of the solid and more useful branches of learning.

It is undoubtedly the duty of all parents, in training up and educating their daughters, to make it the primary object to fit them, not to shine and gain admiration at the opera, the assembly, or at public spectacles, but for the proper discharge of their duties as daughters and wives and mothers; which alone can make them truly useful and happy. It is not the outward adorning of dress and plaiting the hair, nor even the mere cultivation of taste and intellect and refinement of manners, however proper and desirable these may be, which makes woman what she should be; but it is the training of them up in the knowledge and practice of their domestic and relative—their moral and religious duties.

AGRICULTURE. AGRICULTURAL PRODUCTIONS. MANUFACTURES.

SECTION IV.

Agriculture.

Agriculture gives employment to the great body of the people of Vermont. While suitable numbers are devoted to the various trades and professions, which are rendered necessary by the immediate wants of society, six-sevenths of the whole population are engaged in agricultural pursuits; and it is pleasing to observe the gradual improvement, which this art is undergoing in Vermont, and the great advance which it has made, within a few years past, in the public estimation. The time has been, when the professional men, the merchants and even a portion of the mechanics in this state were wont to look down (down?) with feelings bordering on contempt upon the farmer and his employment. And the farmer himself, ignorant, or insensible of his own advantages, submitted to live in a state of vassalage to the other classes, and particularly, to the merchants. But for several years past there has been a gradual change going on in the relative condition of the merchant and the farmer. Or, in other words, the farmers have been learning, (and we hope they will not forget the lesson,) that they are the only class of community, who possess the elements of independence, and, relying upon these, they have been by degrees freeing themselves from their thralldom and rising in their relation to the other orders of society, until *agriculturalists* and *farmers* are become titles of which none are now ashamed.

If it be true that the borrower is servant to the lender, it is emphatically true that the debtor is servant to the creditor; and in this relation, but a few years ago, stood a large part of our farmers to the merchants. The merchants sold upon credit, and must necessarily sell at a much higher price than for ready pay, to compensate for bad debts and for lying out of the use of their money. The farmers, buying upon credit, bought more and at much higher prices than they would have done, if ready pay had been demanded. The consequence was that at the end of the year they found themselves more deeply in debt than they expected, and were obliged to turn out their stock and produce at the merchant's price and give their notes of hand for the balance in money. The notes and accounts became due and resort was had to the law to enforce payment. This gave employment to swarms of lawyers and pettifoggers, whose fees, added to the demands of the creditors, were wrung out of the

hard earnings of the ill-starred farmer. Weighed down by accumulated embarrassments and goaded by the *twigs* of the law, the harrassed people looked upon the legal profession as the prolific fountain of all their sufferings, and upon lawyers as a curse—a very pest in society.

During the embarrassments which prevailed for many years after the close of the revolution, 'they who were in distress, they who were in debt, and they who were discontented frequently gathered themselves' in conventions to consult together respecting their grievances and devise plans of relief. At these meetings it was considered a legitimate and an indispensable part of their business to adopt a series of resolutions, denouncing the lawyers in terms neither mild nor measured. But at length more correct views began to prevail. The people began to discover that their embarrassments and troubles were chargeable rather upon themselves than upon the hated lawyers; and in proportion as they have improved their advantages, by their industry, economy and avoidance of debt, has the prejudice against the legal profession been done away and the occupation of the agriculturist risen in public estimation, till an exchange of the former for the latter has come at length to be considered *no degradation*.

The chief agricultural productions of the state may be learned from the following abstract of the returns of the census of 1840.

Wheat, bush.	495,600	Cocoons, lbs.	4,280
Rye do	230,993	Wax, lbs.	4,660
Corn do	1,119,678	Product Dairy	\$2,008,737
Oats do	2,222,584	do Orchard	213,944
Buckwheat do	228,416	do Garden	16,276
Barley do	54,781	do Nurseries, etc.	5,600
Potatoes do	3,869,751	Horses	62,402
Hay, tons,	869,739	Neat Cattle	384,341
Hops, lbs.	48,137	Sheep	1,681,819
Tobacco, lbs.	585	Swine	203,800
Flax, lbs.	59,000	Poultry, value	\$131,578
Wine, gallons	94	Lumber	\$346,939
Wool, lbs.	3,699,235	Other prod. forest	2,500

The above productions, with the exception of wool, products of the dairy, horses, cattle, sheep, swine, and lumber, of which considerable quantities are exported, are nearly all consumed in the state. For several years past, wool has been the staple production for market.

SECTION V.

Manufactures.

The manufactures carried on in Vermont were, for many years, such only as the immediate wants of the people rendered indispensable, and in general each

DOMESTIC MANUFACTURES.

family were their own manufacturers. With scarcely any tools but an axe, the first settlers entered the forests, cleared off the timber from a small piece of ground, cut down trees to a suitable length, and, by the help of a few neighbors, reared their log houses and covered them with bark. These afforded shelters for their families, and, by persevering industry, they were soon enabled to raise a little flax and wool, which were spun and wove and colored and made into clothing by the females for home and Sunday wear; and we have no doubt that, at that period, the swains in their tow, or checked woollen shirts and kersey frocks and trowsers, and the girls in their tow and linen or flannel gowns and checked aprons, were as happy, yea, and perhaps as proud too, as the moderns in their broadcloths and silks and muslins. The only trades which were then deemed indispensable, were those of the blacksmith and the shoemaker, and these were for the most part carried on by persons who labored a portion of their time upon their farms.

As the condition of the people improved, they, by degrees, extended their desires beyond the mere necessities of life; first to its conveniences and then to its elegancies. This produced new wants, and to supply these, mechanics more numerous and more skilful were required, till at length, the cabinet maker, the tailor, the jeweller, the milliner and a host of others came to be regarded as indispensable.

In addition to the various articles and fabrics for domestic use, Vermont possesses facilities for extensive manufactures of several kinds, which are not surpassed by those of any state in the union. The water power afforded by her streams is unlimited, and her hills and mountains afford an abundance of wood for fuel; and for the manufacture of wool, iron, copers and marble, no part of our country affords the raw material in greater abundance, or of a better quality.

Some account of the different manufacturing establishments in Vermont will be found in part third, under the names of the towns in which they are situated, and the annual aggregate of manufactures within the state according to the returns of 1840, are exhibited below:

26 Furnaces, making 6,743 tons cast iron.
14 Forges, " 655 wrought "
Other metals, valued at \$70,500.
Granite, marble, &c. \$33,880.
17 Paper Mills, making \$214,720 value.
96 Woollen factories, } \$1,331,953 "
289 Fulling mills, }
Silk, 39 pounds, \$99 value.

RETURNS OF MANUFACTURES.

7 Cotton factories, 7254 spindles, manufacturing \$113,000 value.
Mixed manufactures, \$155,276 value.
Hats, valued \$62,432.
261 Tanneries } 102,763 sides sole leather.
 } 102,937 " upper "
Maple Sugar, 4,647,934 pounds.
1 Brewery, making 12,800 gallons.
2 Distilleries, " 3,500 "
2 Glass Houses, \$55,000 value
8 Potteries, 23,000 "
Potash, 718½ tons.
Soap 50,300 "
Candles, 28,687 "
Carriages, 162,097 "
7 Flouring mills—barrels of flour 4,495.
312 Grist mills, } \$1,083,124 value
1081 Saw mills, } manufactured.
20 Oil mills, }
29 Printing offices—Binderies, 14.
2 Rope Walks, \$4,000 value man'd.
Music instruments \$2,290 "
Home made goods, \$674,548
Machinery made, 101,354
Hardware, 16,650
Small arms, 1,156
Precious metals, 3,000
Granite and marble, 62,515
Bricks and lime, 402,218
Value of vessels built, 72,000
Furniture manufactured, 83,275
Houses, 72 brick, } cost 344,896
 468 wood, }
Medicines, drugs and dyes, 38,475
Other manufactures, 488,796

For the purpose of comparison, we introduce the following abstract of manufactures in Vermont, copied from the returns in 1810:

8 Blast furnaces, 986 tons iron, a \$100, \$97,600
2 Air furnaces, 260 do pig, 90, 23,400
26 forges } 817 do crude, 120, 98,040
 } 104 do refined, 150, 15,600
67 cut nail factories, 144 tons nails a 240, 34,560
65 trip hammers—value of the work done, 78,574
11 paper mills—23,350 reams, a \$3 pr r'm, 70,050
26 oil mills—50,637 gallons, a \$1 pr gal. 50,637
125 distilleries, 173,285 do .75 cts. 129,964
205 tanneries—773 tons leather, a \$500, 386,500
166 fulling-mills dressed 942,960 yds. a 25, 235,740
139 carding machn's, 798,500 lbs wool a .06 47,910
Wollen cloth—1,207,976 yards, a 75 cts, 905,982
Cotton cloth—131,326 yards, a 30 cts 39,397
Linen cloth—1,959,931 yards, a 35 cts 650,976
Mixed cloth—191,426 yards, at 38 cents, 72,471
14,801 looms, weave 240 yards each, a 8 276,179
67,756 spin'g wheels, spin 70 sk's ea. a 4 189,716
23 jennies, equal 804 spindles, do 3 1,688
96,760 hats at \$2 193,520
65,580 pair boots, at \$3 196,740
138,700 pair shoes, at 75 cents, 179,025
Saddles and Harnesses, amount of value, 127,940
Cabinet work do do 118,450
Maple sugar, 1,200,000 lbs. at 10 cts. lb. 120,000
Potashes, 1500 tons, at \$100 pr. ton, 150,000

SECTION VI.

Commerce and Navigation.

On account of the inland situation of Vermont, and the various modes of transportation, it is impossible to form any correct estimation of the amount of imports or exports. The commercial business of the state is, however, considerable, and is annually increasing. A large amount of dry goods and groceries are brought into the state and disposed of among the inhabitants; and for several years past Vermont has, to a very great extent, depended upon the state of New York and the western states for her bread stuffs.

The exports from Vermont consist of live cattle, horses, hogs, sheep, wool, lumber, pot and pearl ashes, butter, cheese, iron, marble, paper, copperas, &c. Wheat was formerly exported, but for some years past a sufficient quantity has not been raised for home consumption. When the country was new and the first settlers were clearing their lands, pot and pearl ashes were the staple articles for market. Lumbering also engaged the attention of many in the vicinity of the navigable waters. Connecticut river furnished an outlet for the lumber in the eastern part of the state, while that in the western part found its way to Quebec through lake Champlain, the Richelieu and St. Lawrence, previous to the construction of the Champlain and Hudson canal, since which it has gone through that canal to New York. But this branch of business has been pursued too eagerly for the good of the state. Pine of a good quality is becoming scarce and at the present rate of consumption the time will soon come, when there will not be enough in the state for domestic purposes. For about ten years past wool has constituted the principal article for export; and is so at present, although a large amount of the other articles above named continue to be sent to market.

Vermont being an inland state its navigation is necessarily limited. Indeed it is nearly confined to lake Champlain. A portion of the merchandise and the productions of the eastern parts of the state, it is true, are transported in boats upon Connecticut river, but far the greater portion of the business of those parts is over-land to Boston. The mercantile connexions on the west side of the mountains are mostly with New York, and most of the business of the north western section of the state is transacted through lake Champlain, the northern canal and Hudson river. Previous to the opening

of the Champlain and Hudson canal, in 1823, Montreal and Quebec shared largely in the business of this section, but, since that event, the business with Canada has been comparatively trifling. The opening of that canal not only changed the direction of business, but gave to it a fresh impulse throughout the whole valley of lake Champlain. The amount of business and of the shipping suddenly increased, and has been going on increasing from that time to the present. The whole number of vessels now in service upon lake Champlain, including steam boats, sloops, schooners, and canal boats, exceeds 100, with a tonnage of perhaps 8000 tons, and more than two thirds of these are owned in Vermont. According to the returns made by the collector of the district of Vermont, on the 30th of September, 1838, there were at that time belonging to Vermont, four steam boats, seventeen sloops, fifteen schooners, and thirty one canal boats, being 67 in the whole and rated at 4250 tons.

The first successful experiment in steam navigation, was made in 1807, upon Hudson river, by Robert Fulton. The very next year, 1808, a steam boat was launched at Burlington upon lake Champlain, which commenced running in 1809, for the transportation of passengers and merchandise. Since that time 13 other steamboats have been built, six of which are now in service. The following table, for the materials of which I am chiefly indebted to Captains, J. and R. W. Sherman and Robert White, exhibits a condensed history of all the steam boats, which have been built upon lake Champlain;* and it is a fact worthy of being recorded, that, during 32 years of steam navigation on lake Champlain, and the transportation of more than a million of passengers, no life has been lost or person injured by the explosion of steam. On the 5th of September, 1819, six persons lost their lives by the burning of the steamboat Phoenix, while on her passage a little to the northward of Burlington, and in 1826 one person was killed by the collision of the Phoenix and Congress near Port Kent.

*On lake George, which is so closely connected with lake Champlain, there have been built three steamboats, viz. The first, *Caldwell*, in 1817, at Ticonderoga, by John Winans; length 80 feet, breadth 20, and depth 8; cost 12,000; power 20 horse; speed 5 miles per hour. It was burnt at Caldwell in 1820 or '21. The *Mountaineer*, in 1824, at Caldwell by J. Sherman, length 100 feet, breadth 16, and depth 8; cost \$12,000; power 20 horse, speed 6 miles; run 13 years, and was condemned at Ticonderoga in 1837. The second *Caldwell*, in 1838, at Ticonderoga, by J. Sherman, length 140, breadth 17, depth 8; cost \$20,000; power 40 horse; speed 12 miles an hour, commanded by Capt. L. C. Larabee and now running.

TABLE OF STEAM BOATS.

LIGHT HOUSE.

BREAKWATER.

TABULAR VIEW OF STEAM BOATS ON LAKE CHAMPLAIN.

N a m e s .	When finished	where built.	By or for whom built.	Dimensions. long bro'd d'p	Ton	Cost.	horse speed power h'r	Captains.	Master Carpenters.	Continuance in service &c.
Vermont	1809	Burlington	J. Winans & J. Lough	120 20 8	167	\$20,000	20	John Winans	John Winans	5 years, sunk Oct. 1815
1st. Phenix	1815	Vergennes	Cham. Steamboat Co.	146 27 9½	336	45,000	45	J. Sherman	Roberts	4 " burnt Sept. 5, 1819
Champlain	1817	do	J. Winans do	90 20 8	128	18,000	20	Geo. Brush	John Winans	Burnt at Whitehall 1817
Congress	1818	do	J. Sherman	108 27 8	209	30,000	34	R. W. Sherman	Gorham	16 " Condemned 1835
2d Phenix	1820	do	J. Sherman	150 26 9½	343	45,000	45	J. Sherman	Young, Gorham	16 " do 1837
General Green	1825	Shelburne	Cham. Ferry Co.	75 22 8	115	12,000	28	Dan Lyon	Philips, White	7 " conv't'd to sloop 1833
Franklin	1827	St. Albans	Cham. Trans. Co.	162 22 9	350	50,000	75	R. W. Sherman	Collins	10 " Condemned 1838
Washington	1827	Essex, N. Y.	Ross & McNeil	92 20½ 7½	134	14,000	30	James Snow	Chas. Sampson	Now running
McDonough	1828	St. Albans	St. Albans S. B. Co.	89 20½ 8½	138	12,000	30	Wm. Burton	Elijah Philips	13 " Lost 1841
Winooski	1832	Burlington	Cham. Ferry Co.	136 20½ 8½	226	15,000	60	Dan Lyon	L. S. White	Now running
Water-Witch	1832	Fort Cassin	J. Sherman	90 17 8	107	14,000	40	Duff Green	Samuel Wood	3 " conv'd to schooner 1836
Burlington	1837	Shelburne	Cham. Trans. Co.	190 25 9	405	75,000	200	R. W. Sherman	L. S. White	Now running
Whitehall	1836	Whitehall	Cham. Trans. Co.	215 23 9	460	70,000	200	Dan Lyon	Samuel Wood	do do
Saranac	1842	Shelburne	Cham. Trans. Co.	166 22		25,000	100	Wm. P. Philips	L. S. White,	do do

Some attempts have been made to navigate Connecticut river, adjacent to Vermont, by steamboats, but they have not hitherto been successful. The first was in 1827. A strong boat, 75 feet long and 14½ wide, called the *Barnet*, succeeded, with some help in passing the rapids, in ascending the Connecticut as far as Bel-lows Falls. This boat was taken back to Hartford, Connecticut, laid up and finally broken to pieces. In 1829 Mr. Blanchard built a boat called the *Blanchard* of the size of the preceding, and another 80 feet long, 14 wide and drawing only 12 or 15 inches of water, called the *Vermont*. The stroke of the piston was horizontal, and the power of the engine 120 horse. A few experimental trips were made between Bel-lows Falls and Barnet, but the obstacles were such that the undertaking was re-linquished and has not been resumed.

Light House. Only one light house has been built in Vermont by the general government, and that is situated on Juniper island in lake Champlain. Congress having made an appropriation for the erection of a light house in the vicinity of Burlington, the legislature of Vermont, in November, 1825, passed an act ceding to the United States, at their option, either Juniper island or five acres on Appletree point, as a site for the same. The island being chosen, a light house was erected there in 1826. It stands on the highest part of the island, is built of brick in the form of the frustrum of a cone, with a diameter of 18 feet at the base and 12 at the top, and is 30 feet high. A sufficient light is here kept constantly burning in the night during the continuation of navigation, which is usually from the middle of April to the first of December. The first keeper of this light house was Lieut. F. A. Sawyer. He was succeeded in 1829 by Capt. M. Corning, and the latter in 1841 by Mr. E. Jones the present keeper. The salary is \$375, with the use of the land on the island, about 11 acres, and a boat.

Two other light houses have since been built on the lake, one at Split Rock and the other on Cumberland head, both within the limits of New York.

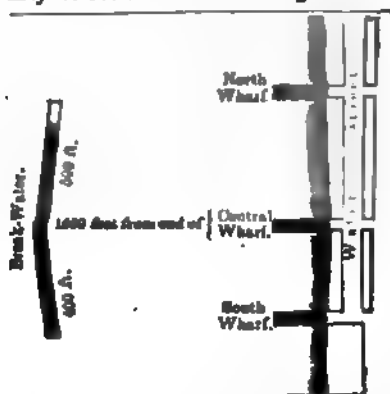
Break-Water.—For the protection of the shipping at Burlington, the principal landing place on the east side of lake Champlain, the Congress of the United States in 1836 resolved to enter upon the construction of a Break-water, and made an appropriation for that purpose. On the 4th of July, 1837, the work was commenced by Nathan B. Haswell, Esq. as agent for the government, who has kindly furnished the following particulars of its design and progress.

BREAK-WATER.

PROJECTED RAIL-ROADS.

BENEVOLENT INSTITUTIONS.

"The Break-water is located 1000 feet from the central wharf in Burlington, and a tolerable idea of its form and position may be obtained from the diagram :



The work presents a line of 900 feet in length, resting upon a firm and even bottom, at a depth of from 30 to 33 feet below the surface of the water on the interior side. It consists of 9 cribs, each 100 feet long, and 50 feet wide at the bottom, diminishing to 35 at the surface of the water, having all the slope (making an angle of about 65 degrees with the horizon,) on the interior side, the exterior being perpendicular. The cribs are constructed of hemlock timber as high as the surface of the water, above which they are of white pine, and rise perpendicularly on both sides to the additional height of 8 feet, making the whole height of the work 40 feet. The timbers are firmly interlocked and doweled with 2½ inch white oak tree-nails, and the cribs filled in a solid manner with stone and covered with gravel. Of the 900 feet put down, 800 are completed, and in its present unfinished state, it affords important protection to the shipping of the lake during the prevalence of our strong northwest and southwest winds. When completed to the extent contemplated, (2,000 feet in length,) it will provide a safe and smooth anchorage around and in front of the wharves, where the shipping of the lake may ride with safety in the most tempestuous weather. The cost of the whole work is estimated at \$150,000, and there remains to be constructed 1,100 feet in length to complete it. Congress has appropriated \$70,000 for the work which has been laid out, and the work is now suspended till further appropriations shall be made."

A similar work has been for several years in progress at Plattsburgh for the protection of the harbor at that place.

SECTION VII.*

Benevolent Institutions.

The voluntary associations for literary, scientific, benevolent and other purposes, which have, from time to time, been formed in Vermont, exhibit a pleasing view of the character and disposition of the people. Social libraries and lyceums, designed for mutual improvement, are sustained in many of our towns, and, where prudently managed, they have been found to exert a favorable influence upon the neighborhoods in which they are situated. Besides these which are local and for the most part temporary institutions, we have several other associations, which are of a more general and permanent character. We shall here briefly notice the following :

The Vermont Bible Society.—This society was organized on the 28th of October,

* It was our intention to insert in this place a section upon roads and turnpikes, embracing some account of proposed canals and railroads within the state; but as other matters have already swelled this part of our work much beyond our calculations, we shall pass them by with only a few remarks. From about the time of the completion of the great Western, and the Champlain and Hudson canal in the state of New York, the subject of canals excited considerable attention in this state for a number of years, and some surveys were made at the expense of the general government for the purpose of ascertaining their practicability, but nothing further was done, till canals came to be superseded, in the public estimation, by rail-roads. This took place about 1830, and from that period rail-roads were the general topic for some time, and several new surveys were made for the purpose of ascertaining the best places for their location. The principal rail-roads, which have been proposed, are the following, viz : from the south line of the state along the valley of the Connecticut and Passumpsic to Canada line, near lake Memphremagog—from Burlington along the valley of the Winooski to Connecticut river—from Bennington to Brattleboro—from Rutland to Whitehall—from Rutland to Connecticut river—and from Vergennes to Bristol. Separate companies were incorporated as early as 1835, for carrying all these into effect, but neither of them has yet been commenced. With all our talk, and our canal and rail-road conventions, we have not, (with the exception of a few cuts by the falls of the Connecticut,) a single rod of canal or rail-road within the state. The connexion of Boston with the valley of lake Champlain by the continuation of the Lowell and Concord rail-road, is an object of vast importance to our state and is one, which will, doubtless, in time, be accomplished; and when completed, through the whole distance, we believe that, at reasonable rates for transportation, the stock invested would be sufficiently productive.

SOCIETIES.

COLONIZATION—ANTI-SLAVERY—TEMPERANCE—ANTIQUARIAN

1812, and deservedly ranks first among the benevolent institutions of the state. It is composed of men of the first talents, of the highest respectability and worth and of all religious denominations. Its object is the distribution of the Scriptures, without note or comment, among the poor and destitute of our own and foreign lands—to aid in placing the word of God, the means of salvation, in the hands of every individual of our fallen race. It has for several years past made it an especial business to seek out the destitute in our own state, and to supply all who will receive it with the word of life. The annual reports of the society show that it has already aided much in distributing the Scriptures, but the light of eternity only will reveal the amount of good which it has effected in promoting the salvation of sinners.

This society holds its annual meeting at Montpelier on the Wednesday succeeding the second Thursday in October. In subordination to the state society, there are auxiliary Bible societies in most of the counties in the state.

The Vermont Colonization Society.—This society was organized in the year 1818, for the laudable and humane object of assisting the free blacks, in the United States, who desire to return to Africa, and thus to remove a principal obstacle to the manumission of those held in slavery in this country. It acts as auxiliary to the United States Colonization Society and has aided in the establishment of a flourishing colony of free blacks on the western coast of Africa, where that degraded race is raised to the dignity and privileges of civilized and enlightened freemen—an establishment to which the Christian philanthropist looks, as the instrument in the hands of God, for suppressing the diabolical traffic in slaves, and for conveying the blessings of civilization and Christianity to the benighted millions of Africa.

This society holds its annual meeting at Montpelier on the third Thursday in Oct.

The Vermont Anti-Slavery Society was formed by a state convention assembled at Middlebury on the 30th of April and 1st of May, 1834. At this convention delegates were in attendance from 26 towns, and numbering about 100. The attention of the people had been, to some extent, previously awakened to the subject of emancipation by the labors of O. S. Murray and Henry Jones, the former of whom had lectured in several counties in this state in 1832, as an agent of the New England Anti-Slavery Society, and encountered much opposition. The prin-

ciples of the state society may be gathered from the 3d article of its constitution which declares, that "In pursuing its enterprise the society asks no physical interference with slavery on the part of the free states, or of the general government; nor will it make any appeal to excite the slaves to insurrection; nor will it use any unlawful or unchristian measures;—but it will seek the overthrow of slavery by fearlessly exposing the guilt and danger of holding men as property, by rebuking sin and calling for its immediate relinquishment—by appeals to the understanding and conscience—by the power of the pulpit and the press—by petitioning Congress to use its constitutional powers for the suppression of the American slave trade and the abolition of slavery in those territories under its jurisdiction—by addressing considerations of interest, safety and economy to the people of the slave holding states—by exhorting the people of the free states, in view of their confederation, and consequent participation with the south, to use all lawful and peaceable means for the removal of the common evil—and by kindly, frankly, yet boldly, holding truth before the public mind, and inviting all to join in forming and expressing a public sentiment, which shall be effectual in its extermination."

Soon after the organization of the state society, auxiliary associations were formed in many towns, numbering in the aggregate many thousand members. In January, 1839, a weekly journal, "*The Voice of Freedom*," was commenced under the patronage of the society and published three years. From its organization the society has been steadily progressing in its work, and at present few are found in the state who are opposed to the principles set forth in its constitution.

The Vermont Temperance Society.—This society was organized in 1829, and holds its annual meeting at Montpelier on the Tuesday next succeeding the 2d Thursday in October. The object of this, and of county, town and neighborhood temperance societies, which are formed in all parts of the state, is the banishment of alcohol, that most prolific source of moral and physical evil, from use as a beverage, and, apparently, much good has been effected by these united efforts. And we have no doubt that, if these societies would entrench themselves upon the ground of expedience, and would then pursue their measures with energy and candor, the amount of good effected by them would be greatly increased.

The Vermont Historical and Antiquarian Society was incorporated in November,

DISEASES OF VERMONT.

CANKER-RASH, DYSENTERY AND FEVERS.

In 1838, Mutual Insurance companies were incorporated in each of the five counties of Bennington, Windham, Rutland, Windsor & Orange, which accounts for the slight diminution of the business of the state insurance company since that period.

SECTION VIII.

Diseases of Vermont.

Although Vermont is blessed with an atmosphere, and with water as pure and wholesome as any other country in the world can boast, still diseases of several kinds have prevailed, more or less, from the very commencement of the settlement. A particular account of these, and especially of such as have been epidemic, with the accompanying circumstances of temperature and state of the atmosphere—origin and progress,—symptoms and treatment, would constitute an interesting and valuable part of our domestic history. The limits, however, of this work will admit only of a brief abstract.

The diseases, which have been most common in Vermont, are fevers, dysentery, consumption and other inflammatory complaints arising from colds, induced by the sudden changes of temperature to which our climate is subject. The two former have frequently been epidemic and at some times very fatal. Cases of consumption have occurred in every year from the first settlement of the State, but it is believed that their increase has been in a much greater ratio, than that of the population. Intermittent fevers were common in many places in the neighborhood of lake Champlain, when the country was new, but since the lands have become generally cleared cases of that complaint are of rare occurrence.

Previous to the American Revolution the population of Vermont was very inconsiderable, and little is known respecting the diseases up to that event. Between the years 1773 and 1777, a malignant sore throat is known to have prevailed at several times and to have been fatal to many children. In the summer of 1776 and, also, of 1777, the dysentery was universally prevalent in this State and throughout New England; and produced great suffering and mortality in the American army, in the neighborhood of lake Champlain. The same disease prevailed extensively in this State between 1783 and 1790. In 1781 catarrhal fevers were

common, but not very mortal. About the year 1784, canine madness prevailed, not only among dogs, but cats, foxes and wolves were affected. On the 17th of March of this year, a Mr. Stewart, of Barnard, was bitten in the face by a mad wolf. In 27 days from that time symptoms of hydrophobia appeared, and three days after he died of that horrid disease. His son, bitten in the arm by the same animal, had symptoms of the disease in 30 days, but recovered.

The canker rash was epidemic in the western part of the State in the winter of 1787-8. In the summer and fall of 1788, the dysentery prevailed, and proved very mortal; and was followed by the measles. In the fall of 1789, the influenza was universally epidemic; scarcely an individual escaped, and in some cases it proved mortal. This year was noted for a general scarcity of provisions; but the statement of Mr. Webster was news to the inhabitants, that, "In Vermont people were reduced to the necessity of feeding on tadpoles, and pea straw boiled with potatoes."

From 1790 to 1795, there were cases of the ordinary diseases of the climate, but no serious epidemic. In the winter, at the beginning of the year 1795, the pleurisy was epidemic, and in some places considerably mortal. In the fall of this year, the ulcerous sore throat, or canker rash began to prevail, and during the following winter it was very mortal. It was computed that there were from 20 to 30 deaths to each 1000 inhabitants, throughout the State. In the spring of 1796, the measles were common, and in the summer and autumn, fevers and dysentery produced considerable mortality. The latter disease was very fatal to young children, particularly in the neighborhood of Rutland.

In 1797, fevers, which had been called inflammatory, bilious, or remittent, assumed a more formidable character, and were then called typhus or putrid fever. The canker rash, or scarlet fever continued this year, and canine madness was common. The prevailing diseases in 1798, were typhus fever and dysentery. They were both severe in some neighborhoods, while others were comparatively exempt. The dysentery was particularly mortal in Pomfret, Norwich and Sandgate. From 1799 to 1806, the dysentery prevailed more or less, during the summer and autumn of each year. In 1802, it produced considerable mortality in many places. The year 1800, was distinguished for the prevalence of the typhus fever in the neighborhood of Woodstock, and

SPOTTED AND LUNG FEVERS,

ASIATIC CHOLERA.

in 1802 and 1803, the canker rash, or throat distemper prevailed generally, but was not quite so mortal as it had been at some former periods. In 1803, the hooping cough prevailed. In 1804, an influenza, or catarrhal fever, produced considerable mortality along the western part of the State. The prevailing disease in 1805, was the typhus fever.

The year 1807, was noted for a severe influenza, which prevailed, not only in Vermont, but throughout the United States and Canada, and also in Europe. In the summer of 1808, fevers were common, but the following year, 1809, was remarkably healthy. This year was, however, noted for a general blight upon wheat.

In the year 1810, the diseases of this State seem to have assumed a new character, taking a sthenic or inflammatory type, and from this period for several years, the greatest amount of sickness was in the winter instead of the summer, as had been previously the case. It was about this period, that that short and fatal malady, the spotted fever, first made its appearance in Vermont. It did not, however, excite general alarm, or prevail extensively till the beginning of 1811. In January of this year, it made its first appearance in the vicinity of Woodstock. From the 23d of January to the 23d of March, the average number of new cases was about 35 weekly, within a circuit of five miles from the court-house in that town. The whole number of cases, within the above limits, up to the first of June, was computed to be about 600; and the number of deaths between 60 and 70. During the same time this disease appeared in the greater part of the towns in the eastern part of the State, from Massachusetts to Canada, and in many places the mortality was, proportionally, much greater than at Woodstock. Although the disease was very considerably abated during the summer, it renewed its ravages in the fall, and in the beginning of 1812, it was in many places, even more fatal than it had been the preceding winter.

This epidemic was calculated to produce the utmost alarm. No age, nor sex, no condition was exempted. It, however, more commonly attacked, and fell with greatest force, upon persons of the most robust and hardy constitutions; and it often proved fatal to such in the course of a few hours from their first attack. It was not uncommon for the patient to be a corpse, before a physician could be brought to his assistance.

The spotted fever was followed by the epidemic *peripneumony*, or lung fever, which proved to be the severest epidemic

ever experienced in Vermont. This disease resembled that which immediately preceded it, excepting in having its chief location upon the lungs, and being longer in reaching its crisis. It commenced in this State, among the troops of the United States army, stationed at Burlington, in the autumn of 1812, where it proved very mortal, carrying off from 10 to 12 a day, for several weeks before it began to spread among the inhabitants. But, by the beginning of the year 1813, it had become general throughout the State; and in the course of the winter, it swept off from 20 to 60 of the most respectable and useful inhabitants of almost every town. The whole number of deaths in the State, by this disease during the winter, was estimated at more than 6000, or one death to every 40 inhabitants.*

From 1814 to 1832, there was nothing remarkable in the diseases of the State. Isolated cases of consumption, typhus and lung fevers and other endemics were constantly occurring, and annually bringing down numbers to the grave, and dysenteries, scarlet fever, measles, influenzas, &c., were several times epidemic, and produced considerable mortality, in particular sections.

Early in June, 1832, that most dreadful disease, the Asiatic cholera, made its first appearance on this side of the Atlantic. It commenced nearly at the same time at Montreal and Quebec, and soon extended into the United States, producing a universal panic throughout the country. The first case of cholera in Quebec, was on the 8th of June, and in the first three days there were 41 deaths, and the number of fatal cases there during the summer, was about 2000. In the course of three months from the appearance of the disease in Montreal, it is computed to have carried off 2800 persons out of a population of 30,000, or one eleventh part of the whole.

Although the alarm was very great in Vermont, on the appearance of the cholera in Canada, but few fatal cases occurred within the State, and these were mostly confined to the towns along lake Champlain. In Burlington there were only four deaths by the cholera, three of these on the 17th and 18th of June, and the last on the 24th of August, and the whole number of fatal cases of the disease within the State did not exceed 10 or 12. During the prevalence of this disease in Canada, in 1834, Vermont was entirely exempted from it.

Since 1834, no alarming epidemic has prevailed, and all parts of the State have

* Our materials thus far are derived principally from Dr. Gallup's work on the epidemics of Vermont.

PULMONARY CONSUMPTION.

LONGEVITY.

LOTTERIES.

been remarkably healthy during this time, with exception of the last fall and winter. Since August, 1841, the amount of sickness and the number of deaths in the State have been unusually great. Typhus and lung fevers have been common in most parts of the State, and in many cases fatal; and during the winter and present spring, a malignant sore throat has prevailed and still continues (May 2, 1842) to prevail through all the western parts, producing considerable mortality. The disease usually commences by a soreness in the throat, but develops itself in other parts in a great variety of ways, and is attended with a high fever. Thus far it has, to a great extent, baffled the skill of our best physicians.

Of all the diseases, which continue from year to year to make their inroads upon our population, the *pulmonary consumption* is the most fatal and most deplorable. Slow in its advances, it almost imperceptibly undermines the constitution—dries up the fountains of life, and annually brings down hundreds to an untimely grave; and the prevalence of this disease seems to have been constantly on the increase from the first settlement of the state to the present time. It doubtless, to a considerable extent, had its origin in the sudden changes, to which our climate is subject, and which have become more marked in proportion as the country has become cleared and cultivated. But it is believed that the increase of this disease is owing still more to our present modes of living, to the confined air of our stove rooms and our compliance with the absurd caprices of *fashion*.

The following are a few instances of longevity:

Names.	Residence.	Died.	Age.
Mrs. Jane Hazelton	Townshend	1810	103
Walter Scott	Swanton	1815	110
Susanna Carpenter	Royalton	1820	105
Benjamin Cook	Whitingham		106
Mrs. Sprague	Clarendon	1839	106
Joseph Monta	Colchester	1840	100
Mrs. Susanna Corliss	Greensborough	1840	100 m
Mrs. Mary Buel	Orwell	1840	101 10
Mrs. Dillia Abbey	Derby	1840	102 6
Simeon Hooker	Westford	1841	101
Mrs. Dorcas Nichols	Braintree	1841	105
Patrick Carigan	Alburgh		100
Mrs. Susanna Hart	Williston	1830	104
Mrs. A. Carpenter	Tinmouth	1817	100 6
Mrs. Catharine Head	Hydepark	1830	110
Mrs. — Brownel	Williston		
Mrs. Susanna Wells	Williston	1811	104

Many more might have been added had pains been taken to collect them. According to the returns of the census of 1840 there were then living in the state 22 persons who were upwards of 100 years of age, and about 200 others who were upwards of 90 years old.

SECTION IX.

Miscellaneous.

Lotteries.—The practice of raising money by lotteries for specific objects was, in early times, sanctioned by the legislatures of most of the states in the Union; and Vermont, though she did not indulge in this species of gambling to very great extent, adopted for a while this mode of dispensing charity, and of promoting good objects. The following list is believed to contain abstracts of all the acts, granting lotteries, which have been passed by the legislature of this state:

To raise £840, for building a bridge over Black river, February 27, 1783.

To raise £150, for repairing the road between Chester and Black river, October 26, 1789.

To raise £150, to aid John Hubbard in erecting a brewery in Weathersfield, October 26, 1789.

To raise £300, to make a road from Woodstock to Rutland, October 27, 1791.

To raise £150, to repair a bridge in Royalton, October 28, 1791.

To raise £200, to aid J. Hubbard and A. Downer in erecting a brewery, November 3, 1791.

To raise £150, for building a road in Shrewsbury, November 3, 1791.

To raise £600, to assist in building a court house in Rutland, Oct. 25, 1792.

To raise £200, to Anthony Haswell to repair loss sustained by fire, Oct. 31, 1792.

To raise £1200, to Jabez Rogers, to repair losses by fire, October 31, 1792.

To raise £300, for building a bridge over the river Lamoille, Nov. 8, 1792.

To raise £500, for building a bridge over White river at Hartford, Nov. 8, 1792.

To raise £150, for building a bridge over Deerfield river at Readsborough, November 8, 1792.

To raise \$2500, granted to A. Spooner, S. Barrett and S. Conant, Oct. 25, 1793.

To raise \$500, for building a bridge in Fairfax, October 30, 1793.

To raise \$500, for making a road from Castleton to Sudbury, Nov. 7, 1796.

To raise \$400, for building a bridge over White river in Stockbridge, Nov. 8, 1796.

To raise \$500, for making a road from Winhall to Bromley, Nov. 8, 1796.

To raise \$500, for building a bridge over Otta-Quechee river at Woodstock, March 7, 1797.

To raise \$500, granted to John Wood, March 9, 1797.

To raise \$2000, granted to Joseph Hawkins of Alburgh, October 30, 1798.

To raise \$1000, granted to Horatio Knight, October 31, 1799.

POST OFFICE.

SENATORS AND REPRESENTATIVES IN CONGRESS.

To raise \$4000, granted to Stephen Co-
nant, November 1, 1800.

To raise \$2500, for building a bridge
over Otter Creek at Vergennes, Novem-
ber 8, 1804.

From about the year 1800, there was a
gradual change in public sentiment with
regard to the propriety of raising money
by lotteries, and no new grants were made
by the legislature after 1804. In 1826,
the sale of foreign lottery tickets having
grown up into an extensive traffic in this
state, Gov. Butler, in his message, called
the attention of the legislature to this sub-
ject, and a law was passed prohibiting the
sale of lottery tickets in Vermont without
a licence from the proper authority and
imposing a duty of \$500 upon a license
to vend tickets for one year, and the pen-
alty for selling without a license was fix-
ed at \$1,000. The next year the duty
upon a license was raised to \$1,000, and
the penalty to \$2,000. By the present
laws of the state lotteries of all kinds and
the sale of lottery tickets, are prohibited
under severe penalties.

Post Office.—In 1783 the governor and
council of Vermont established a weekly

post between Bennington and Albany in
the state of New York. The next year
the legislature of this state established five
post offices within the state: one at Ben-
nington, one at Rutland, one at Brattle-
borough, one at Windsor and one at New-
bury. Between these several places a
mail was transmitted once a week each
way, and the postage was established at
the same rates as that of the United States,
and Anthony Haswell, Esq. of Benning-
ton, was appointed postmaster general.
The post rider from Bennington to Brat-
tleborough was allowed for travel 3*d* per
mile, and those on the other routes 2*d* per
mile. The post riders were allowed the
exclusive privilege of carrying letters and
packages on their respective routes, and
any person who infringed upon this right
was liable to a fine of £10.

Upon the admission of Vermont into
the Union in 1791, the post offices in this
state became a part of the post office es-
tablishment under the control of the gen-
eral government; and since that time of-
fices have been multiplied till almost ev-
ery neighborhood has its post office.

Table of Senators in Congress, showing the time of their election.

Names.	Elected.	Names.	Elected.	Names.	Elected.
Moses Robinson,	Oct. 1791	Horatio Seymour,	" 1826	Steph. R. Bradley,	Oct. 1801
Isaac Tichenor,	" 1796	Benjamin Swift,	" 1832	Steph. R. Bradley,	" 1806
Nath'l. Chipman,	" 1797	Samuel S. Phelps,	" 1839	Dudley Chase,	" 1812
Israel Smith,	" 1803	—	—	James Fisk,	" 1817
Jona. Robinson,	" 1807	Steph. R. Bradley,	" 1791	Wm. A. Palmer,	" 1818
Isaac Tichenor,	" 1814	Elijah Paine,	" 1794	Dudley Chase,	" 1824
Horatio Seymour,	" 1820	Elijah Paine,	" 1800	Samuel Prentiss,	" 1830

Table of the Representatives in Congress, with the time of their service.

Names.	Term.	Names.	Term.	Names.	Term.
Nath'l. Niles,	1791—1795	R. Skinner,	1813—1815	Phineas White,	1821—1823
Israel Smith,	1791—1797	Charles Rich,	1813—1815	W. C. Bradley,	1823—1827
Daniel Buck,	1795—1799	D. Chipman,	1815—1817	D. A. A. Buck,	1823—1829
Math. Lyon,	1797—1801	Luther Jewett,	1815—1817	Ezra Meech,	1825—1827
L. R. Morris,	1797—1803	C. Langdon,	1815—1817	John Mattocks,	1825—1827
Israel Smith,	1801—1803	Asa Lyon,	1815—1817	Geo. E. Wales,	1825—1829
W. Chamberl'n,	1803—1805	Charles Marsh,	1815—1817	Benjamin Swift,	1827—1831
M. Chittenden,	1803—1813	John Noyes,	1815—1817	Jonathan Hunt,	1827—1832
James Elliot,	1803—1809	Heman Allen,	1817—1819	Wm. Cahoon,	1827—1833
Gideon Olin,	1803—1807	S. C. Crafts,	1817—1825	Horace Everett,	1829—
James Fisk,	1805—1809	Wm. Hunter,	1817—1819	Heman Allen,	1832—1839
J. Witherill,	1807—1808	O. C. Merrill,	1817—1819	William Slade,	1831—
Samuel Shaw,	1808—1813	Charles Rich,	1817—1825	Hiland Hall,	1833—
W. Chamberl'n,	1809—1810	Mark Richards,	1817—1821	B. F. Deming,	1833—1835
J. H. Hubbard,	1809—1810	William Strong,	1819—1821	Horace F. Janes,	1835—1837
James Fisk,	1810—1815	Ezra Meech,	1819—1821	Isaac Fletcher,	1837—1841
William Strong,	1810—1815	R. C. Mallery,	1820—1831	John Smith,	1839—1841
W. C. Bradley,	1813—1815	Elias Keyes,	1821—1823	August's Young,	1841—
Ezra Butler,	1813—1815	John Mattocks,	1821—1823	John Mattocks,	1841—

FORM OF A NEW HAMPSHIRE CHARTER.

Form of a N. H. Charter or Grant.—All the New Hampshire Charters being in the same form, and frequent reference being made to them in this and the subsequent part of our work, we shall here insert the form, leaving the names and dates blank. The usual number of shares into which townships were divided was 68.

PROVINCE OF NEW HAMPSHIRE.

George the Third by the grace of God, of Great Britain France and Ireland, King, defender of the faith, &c., To all persons to whom these presents shall come,—GREETING.

Know ye, that we of our special grace, certain knowledge and mere motion, for the due encouragement of settling a new plantation within our said province, by and with the advice of our trusty and well beloved Benning Wentworth, Esq.; our Governor and Commander in chief of our said province of N. H. in N. E. and of our council of said province, have, upon the conditions and reservations hereinafter mentioned, given and granted, and by these presents, for us, our heirs and successors, do give and grant in equal shares, unto our loving subjects inhabitants of our said province of New Hampshire, and our other governments, and to their heirs and assigns forever whose names are entered on this grant, to be divided to and amongst them into — equal shares, all that tract or parcel of land, situate, lying and being within our said province of New Hampshire, containing by admeasurement 23040 acres, which tract is to contain six miles and no more, out of which an allowance is to be made for highways and unimprovable lands by rocks, ponds, mountains and rivers, one thousand and forty acres free, according to a plan and survey thereof, made by our said Governor's order, and returned into the secretary's office and hereunto annexed, butted and bounded as follows, viz: [*Here is inserted the boundary of the township.*] And that the same be and hereby is incorporated into a township by the name of —, and the inhabitants that do or shall hereafter inhabit the said township, are hereby declared to be enfranchised with and entitled to all and every the privileges and immunities that other towns within our province by law exercise and enjoy; and further, that the said town as soon as there shall be fifty families resident and settled thereon, shall have the liberty of holding town fairs, one of which shall be held on the — and the other on the — annually, which fairs are not to continue longer than the respective — following the said — and that as soon as the said town shall consist of fifty families, a market may be opened and kept one or more days in each week, as may be thought most advantageous to the inhabitants; Also, that the first meeting for the choice of town officers, agreeable to the laws of our said province, shall be held on the —, which said meeting shall be notified by — who is hereby appointed moderator of said first meeting, which he is to notify and govern agreeable to the laws and customs of our said province; and that the annual meeting forever hereafter for the choice of such officers for the said town shall be on the — of March annually, —To HAVE and to HOLD the said tract of land as above expressed, together with all privileges and appurtenances to them and their respective heirs and assigns forever, upon the following conditions, VIZ:

I. That every grantee, his heirs or assigns shall plant and cultivate five acres of land within the term of five years for every fifty acres contained in his or their share or proportion of land in said township, and continue to improve and settle the same by additional cultivations, on the penalty of the forfeiture of his grant or share in the said township, and of its reverting to us, our heirs and successors,

to be by us, or them re-granted to such of our subjects as shall effectually settle & cultivate the same.

II. That all white and other Pine trees, within the said township, fit for masting our Royal Navy, be carefully preserved for that use, and none to be cut or felled without our special license for so doing, first had and obtained, upon the penalty of the forfeiture of the right of such grantee his heirs and assigns to us, our heirs and successors, as well as being subject to the penalty of any act or acts of Parliament that now are or hereafter shall be enacted.

III. That before any division of the land be made to and among the grantees, a tract of land as near the centre of the said township as the land will admit of, shall be reserved and marked out for town lots, one of which shall be allotted to each grantee, of the contents of one acre.

IV. Yielding and paying therefor to us, our heirs and successors, for the space of ten years, to be computed from the date hereof, the rent of one ear of Indian corn only, on the twenty-fifth day of *December* annually if lawfully demanded; the first payment to be made on the twenty-fifth day of *December*, —.

V. Every proprietor, settler, or inhabitant shall yield and pay to us, our heirs and successors, yearly, and every year forever, from and after the expiration of ten years from the above said 25th day of *December*, namely, on the twenty-fifth day of *December*, which will be in the year of Our Lord —, *one shilling* Proclamation money, for every hundred acres he so owns, settles or possesses, and so in proportion for a greater or lesser tract of the said land; which money shall be paid by the respective persons abovesaid, their heirs or assigns in our *Council Chamber* in *Portsmouth*, or to such officer, or officers as shall be appointed to receive the same; and this to be in lieu of all other rents and services whatsoever.

In testimony whereof, we have caused the seal of our said province to be affixed. Witness, Benning Wentworth, Esq., our Governor and Commander in Chief of our said province, the — day of — in the year of our Lord Christ, one thousand seven hundred and —, and in the — year of our Reign. B. WENTWORTH.

By his EXCELLENCY's command, with advice of Council. THEODORE ATKINSON, Sec'y.

Province of New Hampshire, [date,] recorded in the book of Charters, Page

THEODORE ATKINSON, Sec'y.

On the back of the Charter is a list of the grantees, with the following:

"His excellency, Benning Wentworth, Esq., a tract of land containing five hundred acres, as marked B. W. in the plan, which is to be accounted two of the within shares; one whole share for the incorporated society for the propagation of the Gospel in foreign parts; one share for a Glebe for the Church of England as by law established; one share for the first settled minister of the Gospel; one share for the benefit of a school in said town.

Province of New Hampshire, recorded in the book of Charters, page

THEODORE ATKINSON, Sec'y.

THOMPSON'S VERMONT.

Part Third.

GAZETTEER OF VERMONT.

TOPOGRAPHICAL AND HISTORICAL DESCRIPTIONS OF ALL THE
COUNTIES, TOWNS, RIVERS, MOUNTAINS, &c.
ALPHABETICALLY ARRANGED.

ACTON.

ACTON.—This was a small township situated in the northern part of Windham county and bounded north by Grafton, east by Athens, south by Townshend and west by Windham and Jamaica. It was granted to Moses Johnson and thirty three others, and chartered February 23, 1782. It contained 5,045 acres, and was originally called Johnson's Gore. It was constituted a township by the name of Acton, November 6, 1800, and the town was organized March 3, 1801, Waitstill Scott being the first town clerk. It was represented only in connexion with Townshend. The settlement was commenced in 1781 by Noah and Timothy Fisher, Ebenezer Bivens and Riverius Hooker. Timothy Fisher cut the first tree with the view of clearing the land. The surface of the ground is uneven. It is well watered by springs and brooks, but has no good mill stream. In October, 1840, Acton was annexed to Townshend, and it now constitutes the northern part of that township.

ADDISON, a post town in the western part of Addison county, in lat. 44° 4' north and long. 3° 42' east,* is bounded north by Panton, east by Weybridge and Waltham, south by Bridport and west by

ADDISON.

lake Champlain, which separates it from the townships of Moriah and Crown Point in the state of New York. It lies 83 miles northwesterly from Bennington, 62 west from Newbury, 40 from Montpelier and 29 southwesterly from Burlington. It was chartered October 14, 1761, and originally contained 28,800 acres, measuring about 7 miles from east to west and 6 from north to south. A portion of the northeastern part, lying east of Otter creek, has since been annexed to Waltham, and the southeastern part, east of Snake mountain, to Weybridge. The first civilized establishment in Vermont on the west side of the mountains, was on Chimney point in the southwest corner of this township. It was made by the French in 1731, the same year in which they built fort Frederick, afterwards Crown Point, and a stone windmill which was built and garrisoned here constituted an outpost of that important fortress while in possession of the French. The first settlement made by the English was in the year 1769 or 1770, by a Mr. Ward, the Hon. John Strong and Zadock Everest, Esq. with their families. This settlement was broken up and the settlers retired to the south, upon the advance of the British up the lake in the fall of 1776, and none of them returned with their families till the month of May, 1783. During their seven years absence, every building which they had erected was destroyed by

* As the whole state is in north latitude, and in east longitude from Washington, the terms north and east will hereafter be omitted.

ADDISON.

ADDISON COUNTY—AIKEN'S GORE.

ALBANY.

the enemy, who were masters of the lake till the close of the war. From its renewal at the close of the war, the settlement advanced with considerable rapidity, and Messrs. Strong, Everest and some others of the first settlers who had been driven off and returned, lived to see the township nearly all under improvement and themselves in possession of all the rational enjoyments of life. A congregational church was organized here November 24, 1803, by the Rev. Job Swift, who labored here for about two years previous to his death, which took place October 20, 1804, while on a visit at Enosburgh. He was born at Sandwich, Massachusetts, January 17, 1743, graduated at Yale college in 1765, and studied theology with Dr. Bellamy. The Rev. Justus S. Hough was ordained as pastor of this church, January 26, 1815, and was dismissed February 21, 1825. At other times the church has depended for preaching upon temporary engagements. Soil generally marl or clay and productive. The surface of this township is low and generally pretty level. Snake mountain, in the southeast corner, is the most considerable elevation. It is very poorly watered and has no valuable mill privileges. Otter creek touches upon the northeast corner, and a dead branch of Otter creek runs through the town, from south to north, a little west of the centre, and unites with Otter creek in Ferrisburgh. Mill river and Pike river are two small streams, which fall into lake Champlain nearly opposite to Crown Point. The magnetic oxyde of iron is found here in small octædric crystals in argillite, and also the sulphuret of iron. *Statistics of 1840.*—Horses, 475; cattle, 3212; sheep, 30,465; swine, 1,099; wheat, *bu.* 1,722; barley, 42; oats, 9,655; rye, 318; buck wheat, 600; Indian corn, 6,250; potatoes, 19,750; hay, *tons*, 10,800; sugar, *lbs.* 865; wool, 82,900. Population, 1229.

ADDISON COUNTY is on the west side of the Green Mountains, at nearly an equal distance from the northern and southern extremities of the state. It lies between 43° 50' and 44° 18' north lat. and between 3° 38' and 4° 18' east long., being about 30 miles from north to south, and 33 miles from east to west, containing about 700 square miles. This county was incorporated February 27, 1737. Middlebury, a thriving town on Otter creek, is the shire town, and is situated nearly in the centre of the county. The Supreme court sits here annually on the fourth Tuesday in January, and the County court on the second Tuesday in June and December. Vergennes, situated on Otter creek 12

miles below Middlebury, is a place of considerable business. The principal stream is Otter creek. It enters the county from the south, crossing about the middle of the southern boundary, and falls into lake Champlain near the northwest corner. Mad river and White river have their sources among the mountains in the eastern part of the county. Granular limestone is very abundant here. It is extensively quarried in many places and is used as a building stone. It receives a good polish, is beautifully variegated and large quantities of it are annually manufactured, particularly at Middlebury, and the marble transported to Albany, New York and other places. The western part is a rich farming country, and the soil is well adapted to the production of grain. The eastern part is mountainous and broken. *Statistics of 1840.*—Horses, 5,425; cattle, 39,718; sheep, 261,010; swine, 14,305; wheat, *bush.* 31,322; barley, 255; oats, 141,794; rye, 11,427; buck wheat, 7219; In. corn, 95,304; potatoes, 440,079; hay, *tons*, 111,120; sugar, *lbs.* 132,013; wool, 676,969. Population, 23,569.

AIKEN'S GORE, called also Virgin Hall, a small tract of only 930 acres, granted February 25, 1782, to Edward Aikin, and lying upon the Green Mountain between Winhall and Landgrove.

ALBANY, a post township, six miles square, lying in the central part of Orleans county. It is 34 miles north from Montpelier, in lat. 44° 43' and long. 4° 47', and is bounded northeasterly by Irasburgh, southeasterly by Glover, southwesterly by Craftsbury and northwesterly by Lowell and Eden. This township was granted June 27, 1781, and chartered June 26, 1782, by the name of Lutterloh. The name was altered to Albany, October 13, 1815. The settlement of this township was commenced about the close of the last century. In 1800 there were only 12 inhabitants. The town was organized March 27, 1806, and Benjamin Neal was first town clerk. This township is watered by Black river, which is formed in Craftsbury, and passes through it in a northeasterly direction, and by several of its branches. There are likewise several considerable ponds, the most important of which, great Hosmer's pond, is partly in Craftsbury. The soil is generally sandy or gravelly. Along the river is some fine intervalle. *Statistics of 1840.*—Horses, 228; cattle, 1,418; sheep, 3,201; swine, 701; wheat, *bu.* 2,618; barley, 894; oats, 10,769; rye, 131; buck wheat, 2,175; Ind. corn, 1,597; potatoes, 43,389; hay, *tons*, 2,685; sugar, *lbs.* 42,298; wool, 6,121. Population, 920.

ALBURN.

ALLEN'S POINT.

ANDOVER.

ALBURN, a post town in Grand Isle county lies in the north west corner of the state and is surrounded by water on all sides, except the north, where it is bounded by Canada, or the 45th degree of north latitude. It is bounded east by Missisco bay, west by lake Champlain, and runs to a point at the south, being of a triangular form. The length of the township from north to south is about 10 miles, and its average width about $3\frac{1}{2}$ miles. It is 33 miles north of Burlington, and its charter is dated February 23, 1781. The French made a small settlement here more than 100 years ago and erected a stone wind-mill upon a point, which has in consequence, received the name of Wind-mill Point. The settlement of this township, by the English, was commenced by emigrants from St. Johns in Lower Canada about the year 1782. The settlers were originally from the states, but, being loyalists, they found it necessary, during the revolutionary war, to shelter themselves in Canada. For some years after the settlement was commenced, they were much harrassed and perplexed by the diversity of claimants to the lands. Ira Allen claimed the town and obtained a grant of it from the state after the settlement was begun, and 5 or 6 years after brought actions of ejectment against the settlers, which terminated in their favor. In their defence in these suits the people expended about \$3000. It was also claimed by Sir George Young as a grant from the Duke of York, and by some others; but the settlers were determined to hold the lands themselves, and all the actions of ejectment brought against them have hitherto been decided in their favor. The town was organized in 1792, and Thomas C. Reynolds was the first town clerk, and David Staunton, the first representative. The religious denominations are Methodists, Episcopalians, Congregationalists and Baptists. The Methodist society is considerable large; the others are small. Neither society has a settled minister, but they are occasionally supplied with preaching. There are some instances of longevity, viz. Patrick Carigan, who was 99 years and 3 months old, and several others have died here who were between 95 and 100. Epidemics have frequently prevailed here, but there have been no very remarkable seasons of mortality. The surface of the town is very level. There are no mountains or streams of any consequence. The soil is very rich and productive. The timber is principally cedar, elm, maple and beech. There is a mineral spring which is somewhat celebrated for its efficacy

in chronical complaints, and is a place of considerable resort. It is undoubtedly useful in cases of scrofula and cutaneous eruptions.* There were in 1824, 8 school districts, 7 school houses, 3 stores, 3 taverns, 2 tanneries and a windmill which did considerable business. *Statistics of 1840.*—Horses, 419; cattle, 1,878; sheep, 4,887; swine, 1,005; wheat, bu. 9,237; barley, 1,017; oats, 13,576; rye, 2,114; b'k wheat, 4,861; In. corn, 3,786; wool, 11,191. Population, 1,344.

ALLEN'S POINT is the southern extremity of Grand Isle in the township of South Hero. It takes its name from Mr. — Allen, one of the early settlers there.

ANDOVER, a post town in the south west part of Windsor county, is 20 miles south-west from Windsor, 68 south from Montpelier, and 37 north east from Bennington, and lies in lat. $42^{\circ} 17'$ and long. $3^{\circ} 43'$. It is bounded north by Ludlow, east by Chester, south by Windham, and west by Weston, and contains about 18,000 acres. The charter of Andover is dated Oct. 16, 1761, and was given to Nathaniel House and his associates. Weston was formerly a part of this township and is included in the charter. It was set off and constituted a separate town, by the Legislature, Oct. 26, 1799. Shubal Geer and Amos Babcock came into this township about the year 1768, and made a beginning, but soon abandoned it. In 1776, Moses Warner, John Simons, John Simons, jr. Eli Pease, Jacob Pease, and James Keyes, emigrants from Enfield, Con., made the first permanent settlement. William, son of Shubal Geer, was the first child born in town. John Simons erected the first saw and grist mill about the year 1780. The town was organized in March, 1781. Moses Warner was first town clerk, and John Simons first representative. The religious denominations in this town are Baptist, Universalist, Methodist and Congregationalist. The Baptist church was organized August 31, 1803. The Rev. Joel Maning was ordained over this church Oct. 2, 1806. The Baptist meeting-house in the northeast corner of the town, is 30 by 40 feet on the ground, and was erected in 1809. The Universalist church was constituted in 1807. The Rev. Cornelius G. Persons preached to this church and society four or five years. The Congregationalist meeting house stands near the centre of the town, is 44 by 52 feet on the ground, and was built in 1820. The spotted fever appeared in one neighbourhood in this town in the spring of 1812, and in eight days carried

* See part first page 8.

ARLINGTON.

ARLINGTON.

off eight persons. The surface of the township is uneven and the soil and timber similar to that of the other towns lying along the eastern side of the Green Mountains. Markham's Mountain and Mount Terrible lie along the western part of the township. These mountains occasioned the division of the town, and render the communication between this town and Weston somewhat difficult. There are no considerable streams. The town is watered principally by the head branches of Williams river. In 1824, the town was divided into eight school districts with a school house in each. There were at that time three grist mills, three saw mills, one fulling mill, one carding machine, two stores, two taverns and one tannery. *Statistics of 1840.*—Horses, 198; cattle, 1,623; sheep, 5,165; swine, 523; wheat, bu. 1,159; barley, 779; oats, 6,319; rye, 1,348; b'k wheat, 420; In. corn, 882; potatoes, 5,050; hay, tons, 988; sugar, lbs. 1255; wool, 9,000. Population, 875.

ARLINGTON, a post town in Bennington county, lies in lat. 43° 4' and long. 3° 54', and contains 39 square miles. It is bounded north by Sandgate, east by Sunderland, south by Shaftsbury, and west by Salem, New York, and is situated 40 miles from Troy, 40 miles from Saratoga springs, 40 from Whitehall and 40 from Rutland. It was chartered July 28, 1761, to a number of persons mostly belonging to Litchfield, Connecticut. The first settlement was made in the year 1763, by Dr. Simon Burton, William Searls and Ebenezer Wallis. In 1764, Jehiel Hawley, Josiah Hawley, Remember Baker and Thomas Peck, removed into this town. The former was a principal land owner, and has left in this place a numerous and respectable posterity. The early records of this town were lost or destroyed in the year 1777, by Isaac Bisco, then town clerk, who became a tory and fled to Canada. Hence the precise time the town was organized, is not known. It was about the year 1768, and Remember Baker, an active and distinguished leader in the controversy between the New Hampshire grants and New York, was the first town clerk. Thomas Chittenden was a resident in this town during the revolution, and was chosen to represent it in the first assembly after the adoption of the constitution, but, being elected governor the same year, was succeeded as representative by Ethan Allen. This town was originally settled by Episcopalians, and an Episcopal society was organized here some years before the revolution, which has existed ever since. The records of this

church, which is called *St. James' Church*, go back to August 16, 1784. The first rector of this church was the Rev. James Nichols, settled in 1786. His salary was £20 a year, which was raised by an assessment upon "the grand list." His conduct proving irregular and unsatisfactory, he was dismissed about the year 1792, and the Rev. Russell Catlin, whose conduct proved still more exceptionable, succeeded him. In the beginning of 1803, the Rev. Abraham Bronson took charge of this church for half the time. This connexion, happy and much blessed, lasted till January, 1826. He was succeeded by the Rev. Joseph H. Coit. In 1828, Mr. C. was succeeded by the Rev. James Tappan, who, the next year, was succeeded by the Rev. Wm. S. Perkins, who resigned in 1833. Since that time the ministers have been the Rev. Luman Foote, the Rev. John Grigg and the Rev. Anson B. Hard, who is a native of the town and the present rector. The first church was erected in 1786, by a tax assessed on the grand list. In 1831 a new and elegant stone church was erected at a cost of \$10,000. Total baptisms 352; present communicants 80. Arlington, lying lower than the surrounding towns, has the principal streams in the county, passing through it. Roaring branch enters the eastern part of the town from Sunderland, Mill brook the southeast part from Glasdenbury, Warm brook the south part from Shaftsbury, and Green river the north part from Sandgate. These streams all fall into the Battenkill, which enters the town near the northeast corner, runs southwesterly about three miles, thence nearly west about six miles further, and crosses the west line of the town into Washington county, New York. These streams afford many very excellent mill privileges, and along their banks are considerable tracts of the finest intervale land. The principal elevations are West Mountain and Red Mountain, which extend from south to north through the west part of the town. These mountains are separated by the Battenkill, in its westerly course through the township. They are covered with a considerable variety of timber, consisting of white, red and black oak, white and black birch, chestnut, hickory, &c. The soil is rich and very productive of English grain. The soil in the eastern part of the town is chiefly loam, and the timber principally beech, maple, ash, birch, elm, bass and butternut. A glade of land, three miles in length, and one in breadth, extending from north to south, near the foot of West mountain, was formerly covered with an extraordi-

ASCUTNEY MOUNTAIN.

ATHENS.

nary growth of white pine. The soil of this tract is sandy. Several extensive quarries of granular limestone or white marble, have been opened here, from which large quantities are annually taken and wrought into tombstones and for other purposes. The value of the marble manufactured in 1840 was \$8,300. There is also an abundance of compact limestone from which lime, of a superior quality, is manufactured. Near Aylsworth's mills in the east part of the town, is a medicinal spring, which is resorted to by the inhabitants of the vicinity as a remedy for cutaneous diseases, ophthalmies, &c. The water is strongly impregnated with feruginous matter, and rather unpleasant to the taste. It contains a minute portion of hydrogen gas, but no carbonic acid. Its temperature is about the same as that of the springs in the neighborhood. Near the northeast corner of the town is a cavern which is much visited as a curiosity. Its entrance is on the east side of a steep hill, and of a capacity sufficient for one person only to enter at a time. From the entrance to the bottom it is about 20 feet, and the passage makes, with the horizon, an angle of about 45°. The cavern then extends westerly in a horizontal direction 13 rods. Its other dimensions are somewhat various in different parts of its course. Its medium width is about eight feet, and its height about the same. In some places, it contracts so as barely to admit a person to pass along, and in others expands into capacious rooms or vaults. Near the western extremity is a large room of a conical form, the sides of which are very regular. Its height from the base to the apex is more than fifty feet, and its sides are limerock incrustated with stalactites. The bottom of the cavern is mostly a fine white clay, and a stream of very pure water runs through its whole length. The road from Bennington to Rutland passes through this town. There are two houses for public worship, two grist and three saw mills, one woollen factory, one fulling mill and one tannery. *Statistics of 1840.*—Horses, 145; cattle, 830; sheep, 12,005; swine, 583; wheat, bu. 743; oats, 9,025; rye, 3,556; buck wheat, 1,092; Indian corn, 5,145; potatoes, 211,212; hay, tons, 4,631; sugar, lbs. 7,420; wool, 27,750. Pop. 1,035.

ASCUTNEY MOUNTAIN, is situated partly in Windsor and partly in Weathersfield, being crossed by the line between those townships. The altitude of this mountain is 3320 feet above tide-water, and 3116 ft. above Connecticut river at Windsor bridge. It is an immense mass of granite, producing but little timber, or vegetation

of any kind, particularly on the southern portion of the mountain. The name of this mountain is undoubtedly of Indian origin, but writers are not agreed with regard to its signification. Dr. Dwight says that it signifies the *three brothers*, and that it was given in allusion to its three summits.* Kendall tells us that the true Indian name is *Cas-cad-nac*, and that it means a peaked mountain with steep sides.† From the summit of this mountain the prospect is extensive and beautiful, and richly repays the labor of climbing its rugged ascent. The Connecticut, which is easily traced, winding its way through the rich and highly cultivated meadows, adds much to the interest and charm of the scenery.

ATHENS, a small post town in the north eastern part of Windham county, is in latitude 43° 7', and is bounded north by Grafton, east by Westminster and Rockingham, south by Brookline and Townshend, and west by Townshend. It is ten miles from Bellows-Falls, and 25 miles northerly from Brattleborough. It was granted March 11, and chartered May 3, 1780, to Solomon Harvey, John Moore, Jonathan Perham and their associates, and contains about 7628 acres. The first beginnings towards a settlement in this town were made in the fall of 1779, by Jonathan Perham, Seth Oakes, Joseph Rasier, James Shafter and Jonathan Foster. They chopped a few acres, erected a log-hut, and then all left the town. Feb. 25, 1780, Jonathan Perham and Ephraim Holden removed their families into the town from Rindge, N. H., and were soon followed by Seth Oakes and family, from Winchendon. The first settlers had many privations and hardships to encounter. The snow was four feet deep when they came into town, and they had to beat their own path for eight miles through the woods. A small yoke of oxen were the only domestic animals of any kind they took with them. The families all moved into the hut above mentioned. In May following, Mrs. Oakes was delivered of a daughter, the first child born in town. The same month, Samuel Bayley, from Sterling, Mass., and Micah Reed, from Westmoreland, N. H., came into town, and during the following summer, they, in company, erected a saw mill, and the next year a grist mill, for which they received 168 acres of land, situated near the centre of the town. The same year, Simon Evans, Ezra Chaffe, and Jeremiah Tinkham began improvements, and on the 18th of September, of that year, Isaac, son of Jonathan Perham, died, and this

*Travels, Vol. II. p. 106. †Ib. Vol. III. p. 202.

ATHENS.

AVERILL.

AVERY'S GORES.

was the first death of an inhabitant of the town. On the 25th of Nov. following, two men, at work in a remote part of the town, were alarmed by the whoops and yells of the Indians. They quit their work and spread the alarm as fast as possible. The people, affrighted almost out of their senses, hurried away with their women and children with all possible despatch, expecting from each tree that they passed to be saluted by an Indian tomahawk or scalping knife. J. Perham and family decamped in such haste that they left their oven heating and their oxen chained to a tree. The report was spread with the greatest rapidity through the neighboring towns, that Athens was destroyed by the Indians. The whole country was immediately in arms to defend themselves and property from the merciless foe. Some spent the whole night in preparing their guns and amunition, and the fearful apprehension of impending destruction, chased sleep from every eye. "Lo the mountain laboured and brought forth a mouse." The hallooing of a hunter, aided by imaginations rendered susceptible by fear, amounted in the course of a few hours to the destruction of a fine settlement and the massacre of its inhabitants.* Athens was organized March 4, 1781, and William Beal was first town clerk. It was represented the same year by Abel Mattoon. The religious denominations are Methodist, Congregationalists, Baptists, Universalists and Christians. These denominations united in 1818, and erected a very good brick meeting-house. The Methodist Episcopal Church was organized in 1801, and have been favored with the labors of several distinguished itinerant preachers, among whom were Jonathan Nichols, John Broadhead, Wilbur Fisk, and H. Guernsey. The surface of this township is uneven, but the elevations are not generally abrupt. The soil is good and produces well. It is, however, much better adapted to grazing than tillage. The apple tree flourishes and produces as well here as in any part of the state. The natural growth of timber is beech, birch, maple, ash, basswood, hemlock and spruce. There is but one stream of consequence in town. It originates in a pond of about 30 acres area in the westerly part and falls into Saxton's river in Rockingham, affording several mill privileges. Lily pond is small, lies in the south west part of the town, and derives its name from the great quantities of white lilies growing in it. The town is divided into three school districts with a school house in each. There is

one saw mill standing on the site where the first mills were erected. *Statistics of 1840.*—Horses, 75; cattle, 553; sheep, 3,061; swine, 284; wheat, bu. 501; barley, 112; oats, 1,082; rye, 589; b. wheat, 322; Indian corn, 1,885; potatoes, 10,035; hay, tons, 966; sugar, lbs., 6,470; wool, 5,387. Population, 378.

AVERILL, a township six miles square in the north part of Essex county, is bounded northeast by Canaan, southeast by Lemington, southwest by Lewis, and northwest by Norton. This township was chartered June 23, 1762, and it is watered by a considerable branch of Nulhegan river, several streams which fall into Connecticut river, and some which pass off northerly into Canada. There are likewise several considerable ponds. It is inhabited by two or three families only. The surface of the town is broken, and the soil cold and unfavorable for cultivation. *Statistics of 1840.*—Horses, 3; cattle, 14; sheep, 35; swine, 15; buck wheat, bu. 100; potatoes, 400; hay, tons, 20; sugar, lbs. 600. Population, 11.

AVERY'S GORES.—A considerable number of tracts of land situated in different sections of the state were granted to Samuel Avery in 1791, and received the name of Avery's Gores. Several of these have since been annexed to townships. We shall mention a part of them. 1. *Avery's Gore* in Addison county, was granted January 27, 1791, and contained 8744 acres. It is bounded north by Lincoln, east by Kingston, south by Hancock and west by Ripton. It lies nearly on the summit of the Green Mountain, and the greater part of it has been annexed to Granville. *Avery's Gore* in Chittenden county, was granted January 7, 1791, and originally contained 5970 acres, but a part of it has since been annexed to Huntington. It is of a triangular form and lies south of Huntington, and west of Fayston. *Avery's Gore*, in Essex county, is bounded north by Norton, east by Lewis, south by Wenlock, and west by Warren Gore. It was granted January 27, 1791, and contains 10,685 acres. It is mountainous and uninhabited. *Avery's Gore*, in Franklin county, is bounded north by Montgomery, east by Lowell, south by Belvidere, and west by Bakersfield. It was granted June 28, 1796, and contains 9723 acres. This Gore lies on the western range of the Green Mountains, and is the source of two branches of the Missisco river. In 1840, it contained 35 inhabitants, and has a post office. *Statistics.*—Horses, 6; cattle, 26; sheep, 50; swine, 7; wheat, bu. 60; oats, 40; buck

*See part second page 70.

BAKERSFIELD.

BALTIMORE.

BARNARD.

wheat, 20; In. corn, 75; potatoes, 1,300; hay, tons, 60; sugar, lbs. 7,00; wool 75. The other Gores of this name, are now annexed to townships.

BAKERSFIELD, a post town, in the eastern part of Franklin county, in latitude $44^{\circ} 47'$ and long. $4^{\circ} 13'$, is bounded north by Enosburgh, east by Avery's Gore and Waterville, south by Waterville and Fletcher, and west by Fairfield. It is 30 miles northeast from Burlington, was granted Feb. 27, 1787, and chartered to Luke Knowlton, Jan. 25, 1791, and originally contained but 10,000 acres. Additions have since been made, and it now contains about 26,000. The settlement of this town was commenced in 1789, by Joseph Baker, from whom the town derives its name. He emigrated from Westborough, Mass. Joel Brigham and Abijah Pratt settled in Bakersfield about the same time. From October 1790 to Oct. 1812, there were only 68 deaths in this town. During the two next years there were 60 deaths, mostly by the spotted and lung fevers. The religious denominations are Congregationalists, Methodists, Baptists and Universalists. The public buildings are a town house, built in 1827, a brick meeting house in 1831, a brick chapel in 1839, and an academy in 1839. The professional men are three clergymen, one attorney and two physicians. This township is somewhat broken, but not mountainous. It is timbered principally with hard wood, and the soil is in general warm and productive. It is watered by Black creek, which crosses the southwest corner, and several other branches of the Missisco river. The streams are, however, small and the mill privileges not numerous. *Statistics of 1840.*—Horses, 260; cattle, 2000; sheep, 4,733; swine, 400; wheat, bu. 3000; barley, 110; oats, 7,728; rye, 176; b. wheat, 450; Ind. corn, 2,450; potatoes, 62,000; hay, tons, 3,570; sugar, lbs. 33,305; wool, 10,876. Population, 1,258.

BALTIMORE, a small township of a triangular form, lying in the south eastern part of Windsor county, in lat. $43^{\circ} 21'$, and bounded east by Weathersfield and Springfield, south by Chester, and northwest by Cavendish. It is eleven miles northwest from Windsor, and 64 south from Montpelier. It was set off from Cavendish by an act of the Legislature, Oct. 19, 1793, and constituted a separate township. The town was organized March 12, 1794, and Joseph Atherton was first town cl'k. It has seldom been represented in the General Assembly. The religious denominations are Congregationalists, Baptists and Universalists. There

are two establishments for the manufacture of starch. The town is well watered with springs and brooks, but has no good mill privileges or streams of much consequence. Hawks mountain, which lies between the town and Cavendish, renders the communication between the two towns difficult, and was the occasion of the division. The summit of this mountain is, for the greater part of the distance, the boundary line. The rocks are almost wholly Gneiss and Granite; the soil warm but stoney. The town has always been healthy. There was not a case of the spotted fever at the time it was epidemic in other parts of the state. There are two school districts with school houses in each. No mills in town. *Statistics of 1840.*—Horses, 40; cattle, 242; sheep, 971; swine, 99; wheat, bu. 292; barley, 17; oats, 1,664; rye, 225; buck wheat, 49; Ind. corn, 905; potatoes, 6,566; hay, tons, 519; sugar, lbs. 1,650; wool, 2,855. Population, 155.

BARNARD, a post town in Windsor county, 21 miles northwest from Windsor, and 37 south from Montpelier, is in lat. $43^{\circ} 44'$, and long. $4^{\circ} 24'$. It is bounded northerly by Royalton and Bethel, east by Pomfret, south by Bridgewater, and west by Stockbridge. The town was chartered July 17, 1761, to William Story, Francis Barnard and their associates. James Call chopped the first timber here in 1774, but left in the fall. The settlement was commenced in March, 1775, by Thomas Freeman, his son Wm. and John Newton. The same season Lot Whitcomb, Nathaniel Paige, Wm. Cheedle and Asa Whitcomb moved their families into town. Thomas Freeman, jr. came into town June 7, 1775. He is now living and is the only survivor of those who spent the first winter here. At the time of the battle of Bunker's hill, (properly Breed's hill,) which took place on the 17th of June, 1775, the firing was distinctly heard in this town by Thomas Freeman and others, a distance of more than 100 miles. On the 9th of August, 1780, this town was visited by a party of 21 Indians, who made prisoners of Thos. M. Wright, Prince Haskell and John Newton, and carried them to Canada. Newton and Wright made their escape the spring following, and Haskell was exchanged in the fall. They suffered many hardships while prisoners and on their return, but they arrived safely at Barnard, and were all living in 1824, upon the farms from which they were taken. They were all prisoners in Canada at the time Royalton was burnt, and were not then taken, as has been stated in the narrative

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of that event. During the years 1783 and 4, canine madness was very common in this part of the state. Dogs, wolves, foxes, cats, &c. were affected by it. On the 17th of March, 1784, a Mr. Stewart of this town was bitten in his finger by a mad wolf. Twenty-seven days from that time symptoms of hydrophobia appeared, and he died of the disease three days after. Barnard was organized as a town, April 4, 1778, and Thomas W. White was first town clerk. Thomas Freeman, Asa Whitcomb and Solomon Aikens were the first select men, and Asa Whitcomb was first representative and first justice of the peace. The religious denominations are Congregationalists, Methodists and Universalists, each of which have a convenient meeting house. The Rev. Joseph Bowman was installed over the Congregational church Sept. 22, 1784, and continued their pastor till his death, which happened April 27, 1806. The Rev. Joel Davis was ordained over this church August 10, 1807, and was dismissed in 1822. The Rev. Hosea Ballou was ordained over the Universalist Church and society about the year 1804, and three or four years after removed to Portsmouth, N. H., and from that place to Boston where he now resides. The Methodist society is numerous, and is principally supplied by the several preachers of that order, who reside in town, and by circuit preachers. The most remarkable revivals of religion were 1801 and 1822, both of which were very general. The hopeful subjects of the latter amounted to nearly 300, about 200 of whom united with the Methodist church, and 67 with the Congregational church. There are no considerable streams. The town lies between Otta Quechee and White river, and contributes to both. Locust creek rises in the southwest part of the town, and running northerly falls into White river in Bethel. Near the centre of the town is a natural pond which covers about 100 acres. It discharges its waters to the northwest into Locust creek. The outlet of this pond affords some very fine mill seats. A branch of Otta Quechee river rises in the south part on which is one saw mill in this town. In the eastern part of the town is a bog of excellent marl. There is a small village situated in the centre of the town, about the outlet of the pond, in which are two meeting houses, two stores, two taverns, and several mills and mechanic shops. *Statistics of 1840.*—Horses, 384; cattle, 1,957; sheep, 8,847; swine, 846; wheat, bu. 2,279; barley, 60; oats, 9,040; rye, 413; buck wheat, 2,067; In. corn, 4,266;

potatoes, 50,286; hay, tons, 4,913; sugar, lbs. 36,360; wool, 18,027. Pop. 1,774.

BARNET, a post town in Caledonia county, lying on Connecticut river, opposite to Lyman, New Hampshire, in lat. 44° 19', and long. 4° 55' and containing about 40 square miles. It is bounded north by Waterford, east by Connecticut river, south by Ryegate, and west by Peacham and Danville, and is 35 miles east from Montpelier, and 65 miles north from Windsor, as the roads are travelled. The charter of Barnet is dated September 15, 1763. The principal proprietors were Enos, Samuel and Willard Stevens, sons of Captain Phineas Stevens, who so nobly defended the fort at Charlestown, New Hampshire, April 4, 1747, against a large party of French and Indians, under the command of M. Debeline.* March 4, 1770, the first settlement was commenced in this town by Jacob, Elijah and Daniel Hall and Jonathan Fowler. Sarah, daughter of Elijah Hall, was the first child, and Barnet, son of Jonathan Fowler, the first male child born in town. The latter was presented by Enos Stevens, Esq. with 100 acres of land. The town was subsequently settled mostly by emigrants from Scotland. A part of the township was purchased in 1774 by the late Alexander Harvey, Esq. and another gentleman, for a company in Scotland. A considerable proportion of the people are of Scotch descent. In the summer of 1772, Enos Stevens, Esq. erected a grist mill on Stevens' river, about 150 rods from its junction with the Connecticut. The first town meeting was held and the town organized March 18, 1783. Walter Brock, Esq. was first town clerk, and Colonel Alexander Harvey the first representative. Major Rogers, on his return from an expedition† against the St. Francis Indians, in 1759, encamped near the mouth of the Passumpsic river in this town, where he expected to meet a supply of provisions to be sent on from Charlestown, New Hampshire, by order of General Amherst. The order of the General was complied with. Samuel Stevens and three others proceeded up Connecticut river with two canoes, to the round island opposite the mouth of the Passumpsic, where they encamped for the night. In the morning, hearing the report of guns, they were so terrified that they reloaded their provisions and hastened back to Charlestown, leaving Rogers and his famished rangers to their fate. The Presbyterian church and society is the most numerous in town. The Rev.

* See part second, page 7.

† For an account of this expedition see part second, page 14.

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David Goodwillie was settled over it in 1791, and was their minister many years. The Rev. Thomas Goodwillie is the present minister. The first meeting house was built in 1789. A small Congregational church was formed in this town, October 21, 1829, and the Rev. Andrew Govan officiated here about three years. It consists of 46 members. In 1811, the spotted fever occasioned great mortality in this and the neighboring towns. The typhus fever prevailed in 1815, '16 and '17, and carried off a considerable number. The principal streams are the Passumpsic, which falls into the Connecticut just below the foot of the 15 mile falls, and Stevens' river, which unites with the Connecticut about two miles below the mouth of the Passumpsic. On these streams are several valuable mill privileges, the most remarkable of which is at Stevens' mills on Stevens' river. At this place the river, which is three rods wide, falls about 100 feet in the distance of ten rods. At the foot of the 15 mile falls in Connecticut river, is a cluster of 21 islands, the largest of which is said to contain 90 acres. There are several other fertile islands of considerable size between Barnet and Lyman. Some parts of the town are broken and hilly, but the soil is in general rich and excellent for pasture and tillage. There is some handsome intervale along the Connecticut and Passumpsic in this town, the ascent from which to the upland is precipitous and rocky. The rocks which form the precipice are principally argillaceous slate, and, just below the mouth of the Passumpsic, they rise from 100 to 300 feet nearly perpendicular. Iron ore has been found near the mouth of the Passumpsic. There are three natural ponds in this town, viz. Harvey's pond covering about 300 acres, Ross' pond, about 100, Morse's pond, about 15 acres. The present head of boat navigation on Connecticut river is at the lower village in this town at McIndoe's falls. The principal places of business are at this village, at the village at Stevens' mills, and the village at Randal's mills on the Passumpsic river. *Statistics of 1840.*—Horses, 529; cattle, 2,898; sheep, 6,601; swine, 1,711; wheat, bush. 4,652; barley, 412; oats, 39,672; buckwheat, 559; Ind. corn, 6,780; rye, 203; potatoes, 66,410; hay, tons, 4,815; sugar, lbs. 19,670; wool, 12,229. Population, 2,030.

BARRE, a post town in the southeast part of Washington county, lies in latitude 44° 11' and longitude 4° 31', and contains 31 square miles, or 19,900 acres. It is bounded north by Montpelier and Plainfield, east by Orange, south by

Williamstown and west by Berlin, and lies about 50 miles northwesterly from Windsor. This township was granted Nov. 6, 1780, to William Williams and his associates, and chartered by the name of Wildersburgh. This name being unpopular with the inhabitants of the town, in the year 1793, a town-meeting was called, to be holden at the house of Calvin Smith for the purpose of agreeing on some other name to be presented to the legislature for their sanction and approval. The meeting being opened, freedom was given for any one to present the name he chose, and the choice among the number presented was to be decided by vote of the town. Several names were proposed, such as Paris, Newburn, &c. Two of the voters present, Capt. Joseph Thomson and Mr. Jonathan Sherman, the first from Holden, the other from Barre, Mass., each in their turn strenuously contended for the name of the town from which he came; and as the matter seemed to lie chiefly between these two, it was proposed that it should be decided between them, *by boxing*, to which they readily agreed. The terms were, that they should fight across a pole; but if one should knock the other down, they might then choose their own mode of warfare. The meeting then adjourned to a new barn-shed, erected by said Smith, over which a floor of rough hemlock plank had just been laid, and on this the issue was to be decided. Agreeably to this arrangement, the combatants advanced upon each other, and soon Thompson, by a well directed blow, brought his antagonist to the floor, and, springing upon him at full length, began to aim his heavy blows at his head and face; but Sherman, being more supple, avoided them, and they generally fell harmless on the floor, except peeling his own knuckles. During this process, Sherman was dexterously plying his ribs from beneath, when Thompson was soon heard to groan, and his blows became palsied and without effect. Sherman then rolled him off, and, springing upon his feet, exultingly exclaimed—*"There, the name is Barre, by God!"* Accordingly a petition for the name Barre was presented, and sanctioned by the legislature the same year. The day following this encounter, Sherman called on Dr. Robert Paddock, the physician of the town, who was an eye-witness of the transaction, and is still living, and who related these particulars to the writer, and requested him to extract from his back and posteriors the hemlock splinters he had received while writhing on the plank floor. In 1788, Samuel Rogers

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and John Goldsbury, one from Bradford, the other from Hartland, Vt., with their families, moved into this town and began converting the wilderness into farms. The next year a number of other families came in, and from this time the town settled rapidly by emigrants from Worcester county, Mass., and from New Hampshire and Connecticut. The town was organized, March 11, 1793, and Joseph Dwight was first town-clerk. It was first represented in the General Assembly in 1796, by Asaph Sherman. The religious societies are Congregationalists, Methodists, and Universalists, each of which have a meeting house; the Congregational meeting house is 60 by 50 feet and was built in 1808—it stands on an elevation one-fourth of a mile east of the north or lower village, on the Road to Chelsea. The Rev. Aaron Palmer was ordained to the pastoral care of the Congregational church Feb. 23, 1807. He was a pious and faithful minister of Christ; but having a delicate constitution, he fell a victim to a quick consumption, which terminated his earthly career on the 7th of February, 1821. He lived beloved and died lamented. The next year the Rev. Justus W. French received a call by said church and society to settle as their minister, and was ordained May 23, 1822. He remained their pastor 10 years, and was dismissed on account of ill health. From this period till 1840, two other ministers were settled over said church and society, and dismissed by counsel, viz. Rev. Joseph Thacher and Rev. James R. Wheelock. Rev. Andrew Royce, their present minister, received a call and was ordained as pastor over said church and society, Feb. 18, 1841. In 1840, a majority of the church and society, believing the location of the old meeting house to be inconvenient and unfavorable to their prosperity, built a new meeting house in the village, one-fourth of a mile west of the other; it is of brick, 65 by 44 feet, built in the modern style, and is a good building; this created some little dissention and alienation of feeling with a minority, but it is believed all are at present happily united. The members belonging to the Congregational church may be estimated at 180. In the year 1838, the Methodists built a new and elegant meeting house, in the lower village, 62½ by 44 feet. It was built in the modern style and well finished, and has the appendage of a good bell. This and the other new meeting house stand about 15 rods apart. Previous to building the new, the society sold their old meeting house to a number of individuals who removed it to a central part of the

village and fitted it up for a store, mechanic shops, &c. The Methodist society is large and respectable, numbering about 150 communicants, belonging to the town. They are usually supplied by stationed preachers, whose term of service is commonly two years. The Rev. John Currier is their present preacher. A Universalist society was organized here soon after the commencement of the settlement. In 1808, the Rev. Paul Dean, now of Boston, was ordained over said society, but soon left the town. From that time they had not regular preaching, till the year 1821, when they settled the Rev. John E. Palmer as their minister, and in 1822, they erected a brick meeting house in the south or upper village. Of late they usually have preaching about half the time on the Sabbath, and Mr. Palmer is employed in the neighboring towns. The number who nominally belong to the society is larger than either of the former. The Baptists, by reason of deaths and removals, are not known as a society in the town. The inhabitants of this town were remarkably healthy till the year 1795, when the scarlet fever or canker rash made its appearance as an epidemic, and prevailed for about a year, during which time almost every child, some young people and several 30 or 40 years old had the disease, but it proved fatal only to children. From this time it was generally healthy till February, 1811, when the spotted fever made its appearance, and soon became alarming. Those who did not recover seldom lived over 36 hours, and some died within 3 or 4 hours from the time they were attacked with the disease. The approach of warm weather put a stop to its ravages. In the winter of 1812 and '13, the inhabitants were visited by much the most fatal epidemic disease that has ever prevailed in the town—it was an inflammation of the lungs with a fever of the typhoid kind, commonly called *pneumonic Typhoides*. The subjects of this disease were generally people of middle age, and many who were heads of families were swept off by it. It was much more fatal to males than to females. Warm weather put a stop to its ravages, and the people have since, with few exceptions, been remarkably healthy.* Dr. Robert Paddock from Connecticut, moved into this town in Aug. 1794, and for many years was the principal physician. There are, at present, three others. The soil is, in general, a dry warm loam, free from stone, and as

*The number of deaths in Barre from 1808 to 1813 inclusive, were as follows: 1808, 16; 1809, 16; 1810, 24; 1811, 33; 1812, 34; and 1813, 70.

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well adapted to agricultural pursuits as any township in the county. The surface is uneven, but there are no elevations of much consequence except Cobble and Millstone hills, so called, the first in the easterly, the other in the southeast part of the town, each of which is made up of an almost solid mass of granite. The granite is of a light gray color, and is not surpassed by any in New England. Jail Branch washes the base of Cobble hill on the southwesterly side, from which it rises abruptly, and, in some places, almost perpendicularly to the height of about 500 feet. On the east, north and west, it subsides gradually to the adjoining farms, so as to be easy of ascent with teams, to its summit. The region here, mostly covered with granite rock, would, probably, form an area of about 200 acres. Millstone hill lies about a mile and a half south of Cobble hill—it is a much larger swell and probably rises higher than the former. It is of hemispherical form, and generally of regular ascent on all sides. The region of rock is greatest on the north and westerly part. This and the other hill contain inexhaustible quarries of this stone. The granite for the *State House* in Montpelier was taken wholly from these hills, and transported thither with teams; the distance from Cobble hill being 8, from the other 9 miles. The Pillars in front of said building were taken from Cobble hill. This granite is a source of profit to the individuals who own it, and as the country around advances in improvement and wealth, it is eagerly sought by those who can afford the expense, as a most durable and ornamental article in building. It is used for basements, or under-pinning, pilasters and caps for doors, caps and sills for windows, door steps, fence posts, aqueducts, and many other purposes. It is quarried from the rock by means of drilling and settling wedges fitted for the purpose, by which it is split to any length, thickness and depth, required. This stone, when wrought by skillful workmen is capable of receiving a smoothness nearly equal to marble; and there are a number of artists in the town who are engaged in working it. Large quantities of it are transported to Montpelier, Burlington and other parts of the country. The principal streams are Stevens' and Jail branches. Stevens' branch rises in Williamstown and runs north into Barre, and then takes a northwesterly course through a corner of Berlin, and unites with Winooski river between Berlin and Montpelier. Previous to the settlement of this town, a hunter by the name of Stevens was found dead in his

camp, near the mouth of this stream, lying on a bed of beaver skins, with a tin kettle, containing herbs, probably for medicine, hanging over the place where he had built a fire. He was buried near the spot, and from him the branch received its name. Jail branch rises in Washington, [see Washington,] runs northerly into Orange, thence westerly into Barre, and unites with Stevens' branch a little south of the lower village, and near the centre of the town. These streams, in their passage through the town, afford many excellent mill and other water privileges. There are two considerable villages in town, commonly denominated the upper and the lower, or Barre and south Barre. The lower village is situate about three-fourths of a mile northwesterly of the geographical centre of the town; and from its central situation, as the stage road from Royalton to Montpelier, and the stage road from Haverhill and Hanover, N. H., to Montpelier, form a junction here, it bids fair to become a place of considerable business. Within a few years this village has made considerable improvement. Twingsville, situate half a mile north of this, is a neat little village and has been built up within a few years, under the auspices of Mr. Twing; and from its proximity to this, may justly be said as belonging to it. In this village, united, there are two taverns, three stores, two houses of public worship, two school houses, one of which is 36 by 26 feet, two stories, built of brick; one starch factory, one clothier's shop one carding machine, one tin, stove-pipe and copper plate manufacturer, two shoe shops, four black smith shops, one tannery, one tailor shop, two plough makers, one wheel wright, also, a *grist and saw mill, a foundry and factory for turning iron*, which belong to Mr. Joshua Twing, and deserve a passing notice. This factory or machine shop is a spacious building of brick, 80 by 28 feet, two stories and does a good business in the line for which it was erected, which is, principally in finishing and polishing castings for mills, &c. and is the only factory of the kind in the state. In connexion with this building is a foundry, in which the largest mill irons are cast, after which, by operation of the machinery, (which is principally the invention of the owner,) they receive a trimming and polish not heretofore known in this part of the country. These castings, in the manner in which they are finished, have obtained great celebrity, not only in this state, but in the neighboring states. Many sets of these castings have found their way into Pennsylva-

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nia, North Carolina, Missouri and Wisconsin. In the foundry, about 100 tons of iron are annually wrought into these castings, together with stoves and various other articles of general utility. Mr. Twing is noted as a mill-wright, and has, annually, in his employ, in building mills abroad, and in the various branches connected with the factory, about 30 workmen. The number of inhabitants in the village above mentioned, in connexion with Twingsville, is about 500. The upper village or south Barre, is situate a mile and a half south of the lower, on the road leading to Williamstown, and is a considerable village. There are here, a meeting house, with a bell, one tavern, one store, a good grist and two saw mills, the grist mill containing four run of stone, one carding machine, one foundry for casting stoves, &c., one clotheir's shop, one starch factory, one tannery and shoe shop, one cabinet shop and two blacksmith shops. This place is centrally situated as a place of business for the south part of the town. Number of inhabitants in this village is about 200. Besides the above there is another foundry, centrally situated between the two villages, for casting stoves, plow irons, &c. owned by J. L. & G. Robinson. Besides the forementioned, there are in the town one other grist mill and three saw mills. The town is divided into fifteen school districts, in each of which a school is generally maintained six months in a year. *Statistics of 1840.*—Horses, 543; cattle, 2,826; sheep, 8,997; swine, 1,255; wheat, bu. 3,560; barley, 794; oats, 26,901; rye, 698; b. wheat, 1,307; Ind. corn, 9,170; potatoes, 120,337; hay, tons, 6,938; sugar, lbs. 62,158; wool, 26,621. Population, 2,126 J. R.

BARTON, a post town in Orleans county, situated in lat. 44° 45' and long. 4° 49', containing 36 square miles. It is bounded north by Brownington, east by Westmore and Sheffield, south by Glover, and west by Irasburgh and Albany, lying 40 miles northeasterly from Montpelier. October 28, 1781, it was granted to Gen. William Barton, of Rhode Island, and his associates, by the name of Providence; and from him the town derives its name. It was chartered Oct. 20, 1789, and then took the name of Barton, in honor of the principal proprietor. The settlement of this town was commenced about the year 1796, by Jonathan Allyne, Asa Kimball, James May and John Kimball. The first settlers were from Rhode Island and New Hampshire. The town was organized March 20, 1798, and Abner Allyne was first town clerk. At the time of its or-

ganization there were 19 legal voters in town. The Congregational church and society here have a good meeting house, which was erected in 1820, and principally at the expense and through the instrumentality of Col. Ellis Cobb of this town. The soil of this township is generally very good. *Willoughby's* river runs a short distance in this town, and falls into Barton river. *Barton river* runs through the town from south to north. The pond in Glover, which broke its northern bound and run entirely out on the 6th of June, 1810, passed down this river, making very destructive ravages: the traces of which are still to be seen. There are several ponds in Barton of which Belle pond is much the largest. The outlet of this pond, which is one of the head branches of Barton river, affords some of the finest mill seats in the country. At this place is a thriving little village, containing two taverns, two stores, and a number of mills and mechanic's shops. There are in town two saw mills, one grist mill, one fulling mill, and one woollen factory. *Statistics of 1840.*—Horses, 287; cattle, 1,058; sheep, 4,447; swine, 492; wheat, bu. 1,177; barley, 1,072; oats, 8,632; rye, 46; b. wheat, 820; Ind. corn, 1,952; potatoes, 34,633; hay, tons, 2,821; sugar, lbs. 26,041; wool, 10,695. Population, 892.

BARTON RIVER is formed in the township of Barton. One of the head branches of this river, originates in Glover from the fountains of *Runaway* pond, and runs northerly into Barton; the other rises from two small ponds on the line between Sutton and Sheffield, and after passing through Belle pond, unites with the stream from Glover. Their united waters take a northerly direction, and, just before they reach the north line of Barton, receive *Willoughby's* river, a considerable stream which arises from a large pond of the same name in Westmore, and runs westerly eight or nine miles through the south part of Brownington and north part of Barton. From Barton, Barton river continues a north course, passing through the northeast corner of Irasburgh and eastern part of Orleans, into *Memphremagog* lake. This river waters about 160 square miles.

BASIN HARBOR. See Ferrisburgh.

BATTENKILL. This stream is formed in Dorset near the head of Otter creek, and runs south into Manchester, where it receives several branches; thence southwesterly across the northwest corner of Sunderland into Arlington, where it receives *Roaring brook*, a considerable stream, which rises in Sunderland, and several oth-

BELAMAQUEEN BAY. BELLE POND—BELLOW FALLS—BELVIDERE. BENNINGTON.

er tributaries. It thence takes a westerly direction through Washington, N. Y. receiving in its course White creek, which originates in Rupert and Pawlet in Vermont, and falls into Hudson river, three or four miles below Fort Miller. The whole length of this stream is about 43 miles, and about one half the length of it lies in this state. It waters, in Vermont, about 225 square miles, and affords a number of very good mill privileges. Along its banks are considerable tracts of valuable intervale.

BELAMAQUEEN BAY. See St. Albans.

BELLE POND, called also Belle-water pond, is 3 miles long and $1\frac{1}{2}$ wide, situated in the southeastern part of Barton. It derives its name from the clearness of this water.

BELLOW FALLS. These are the most considerable falls in Connecticut river, and are situated against the southeastern part of Rockingham. See Rockingham.

BELLOW FALLS VILLAGE. See Rockingham.

BELVIDERE, a post town in the northern part of Lamoille county, lying on the western range of the Green Mountains, about 32 miles north east from Burlington, and about the same distance north from Montpelier. It is bounded north by Avery's Gore and Lowell, east by Eden, south by Johnson, and west by Waterville, and contains 30100 acres. It was granted to John Kelly, March 5, 1787, and was chartered by the name of Belvidere, November 4, 1791. A considerable part of this township is mountainous and unfit for cultivation. The settlement was commenced about the year 1800, and in 1810 the population was 217, being ten more than at the present time. The township is watered by two branches of the river Lamoille, on one of which is a saw mill. *Statistics of 1840.*—Horses, 42; cattle, 246; sheep, 683; swine, 116; wheat, bu. 332; oats, 820; rye, 39; Ind. corn, 294; potatoes, 9,310; hay, tons, 553; sugar, lbs. 3,440; wool, 1,187. Population. 207

BENNINGTON, a half shire town of Bennington county, lying near the southwest corner of the state in lat. $42^{\circ} 51'$ and long. $3^{\circ} 53'$. It is bounded north by Shaftsbury, east by Woodford, south by Pownal and west by Hoosic, in Rensselaer county, New York, and is 100 miles south easterly from Montpelier, 110 miles west by north from Boston, 33 north east from Albany, 160 northeasterly from New York, and 375 east by north from Washington. The township was chartered by Benning Wentworth, governor of New Hampshire, Jan. 3, 1749, and was called

Bennington in allusion to his name. It was described as a township six miles square, lying six miles north of the Massachusetts line, and 20 miles east of Hudson's river. The grantees were William Williams and 61 other individuals, residing principally in Portsmouth, New Hampshire. This was the first township granted within the present limits of Vermont, and the conditions of this and subsequent New Hampshire grants, may be seen in the *Form of a New Hampshire charter*, in part second, page 224. Immediately after the grant the proprietors met at Portsmouth and made a plan of the township, by which, after laying out 64 lots of one acre each, for each proprietor, near the centre for a "town plot," in conformity with the provisions of the charter, they divided the residue into 64 equal parts, which they distributed among themselves by lots. In the survey of the township, which was made in October, 1749, an allowance, in conformity with the custom of the time, of one chain in every thirty was made for "swag," by which the township was enlarged and made to include about 39 square miles, instead of 36, the actual charter quantity. In a statement of the claim of New York to the territory now Vermont, published by order of the assembly of that province, in 1773, it is said that the grantees of Bennington attempted to avail themselves of their grant in 1753, but were prohibited from taking possession by a proclamation issued by the governor of New York. Such proclamation must have been unnecessary, the disturbed condition of the New England frontier being sufficient to prevent the occupation of the lands till after the conquest of Canada, in 1760. The settlement of the town commenced in the spring of 1761. The most advanced posts at this time in New England, west of the Green Mountains, were two small forts, called east and west Hoosic; the one situated about a mile west of the present village of North Adams, Mass., and the other near the site of the meeting house in Williamstown. Here, forts had, for a number of years, given partial protection to some families in their immediate neighborhood, but afforded insufficient security against the French and Indians, to induce extensive settlements. There were, also, to the west of Bennington, along the banks of the Hoosic, a few Dutch families, four of which had seated themselves as far up the river as Pownal. It is believed none of the grantees of the town ever removed to Bennington. The first settlers were purchasers under the original proprietors and came from Mas-

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sachusetts. Samuel Robinson, of Hardwick, Massachusetts, who had been a captain during the French war, on his return from Lake George to Hoosic forts, while proceeding up Hoosic river, mistook the *Walloomscok* for that stream, and followed it up to the tract of country now Bennington. Here he and his companions, finding they had lost their way, encamped over night, and in the morning changed their course and pursued their way to the forts. Capt. Robinson was much pleased with the country, and returned to his family with a determination to begin a settlement upon it. He accordingly repaired to New Hampshire, made purchases of a considerable portion of the rights and then sought for settlers. The first emigration to the town consisted of the families of Peter Harwood, Eleazer Harwood, Leonard Robinson, and Samuel Robinson, jr., from Hardwick, and of Samuel Pratt and Timothy Pratt, from Amherst. The party including women and children numbered about twenty. They came on horseback across the mountain by the Hoosic forts and through Pownal, bringing on their horses all their household goods, and arrived in town the 18th of June, 1761. Benjamin Harwood, a most estimable man, now living in Bennington, son of Peter Harwood, was the first person born in town, Jan. 12, 1762. During the fall of 1761, other families to the number of thirty or forty came into town, among whom were those of Samuel Robinson, sen. James Breakenridge, John Fassett, Eleazer Wood, Elisha Field, Samuel and Oliver Scott, Joseph Safford, John Smith, Joseph Wickwire, Samuel Montague, and Samuel Atwood. The families of Clark, Fay, Hubbell, Henderson, Walbridge, Dewey, Warner and Harmon, were early settlers, but are believed not to have arrived in town the first year. The first settlers of Bennington encountered the usual dangers and privations attendant at that early period on the pioneers of a new country. It is related that many of the emigrants arrived late in the fall, and that but for the uncommon mildness of the season, which seemed Providentially to postpone the setting in of winter to an unusually late period, their preparations for it could not have been completed, and extreme suffering must have been the consequence.

The first town meeting was held March 31, 1762. Samuel Montague was chosen moderator, and it was then voted that "every inhabitant and free-holder should have free liberty to vote in said meeting." The meeting proceeded to choose town

officers, which consisted of a town clerk, five select men, a town treasurer, two constables, two tything men, two haywards, two fence viewers, and two *deers-rifts*. Moses Robinson was the first town clerk. Capt. Samuel Robinson had been appointed a justice of the peace by the governor of New Hampshire; thus the little community became an organized government, acknowledging the authority of New Hampshire; though from their distant and isolated situation, the settlers were in a great measure independent of all government, but that which they chose to impose on themselves. Much of the most important public business of the settlers, for two or three of the first years, seems to have been taken under the jurisdiction of the proprietors of the town, who held separate meetings from the inhabitants. The first proprietors meeting, of which a record has been preserved, was held the 11th of February 1762, at which meeting a committee was appointed "to look out a place for a meeting house;" and on the 26th of the same month the committee reported, and the site was agreed upon. The house was built partly by individual contributions and partly by a tax on the proprietors, and was erected and occupied about the year 1764, though it was not entirely finished until several years afterwards. It was a wooden building, without a steeple, and stood on the "town plot," between the site of the present house and Hick's hotel, the road passing both sides of it. It was taken down about the year 1804, after the present house was finished. The subject of schools also received the early attention of the proprietors, who, in Jan. 1763, voted a tax for building a school house, and the following April the inhabitants in town meeting voted a tax to support schools "in three parts of the town."

The settlers suffered great inconvenience from the want of roads and bridges, and also for the want of mills. To overcome these difficulties the proprietors and inhabitants taxed themselves freely, both in labor and money. Roads were opened to different parts of the town, and bridges built where necessary. Samuel Robinson and Joseph Safford, had built "the Safford mills," a grist mill and saw mill, in the east part of the town by the first of Sept., 1762, for which they received a bounty of forty dollars for each mill, the bounty having been previously promised by vote of the proprietors. A bounty of forty dollars was also given for erecting a saw mill "on the west side of the town."

On the 2d of December, 1762, a church was organized, which, by vote on the

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same day, adopted the Cambridge platform, with the exception of such parts of it as admitted the aid of civil magistrates in enforcing the support of the ministry, and their coercive power over the church in other matters.* They denominated themselves Congregationalists, and were such in every respect, except in regard to their enlightened notions of religious freedom, which, being at the time in advance of the great majority of their brethren, procured for them the temporary name of *Separatists*. In the fall of 1763, the Rev. Jedediah Dewey of Westfield, Mass., in consequence of a call from the church and society at Bennington, removed to this town and became their pastor. In addition to the encouragement given him by voluntary subscription, the proprietors of the town voted him the "minister's right," which was situated adjoining the town plot, and was valuable. Mr. Dewey continued pastor until his death, Dec. 21, 1778.

The emigration to Bennington which had commenced in 1761 steadily continued. At the end of four years the town probably contained a population of about 1000; and the adjoining towns of Pownal and Shaftsbury might together contain nearly as many more. The settlers had overcome the first difficulties and hardships of a new country, had cleared and put under successful cultivation a considerable portion of their lands, had erected comfortable dwellings and out-houses, had built roads and bridges; and had, in short, become a prosperous and thriving community. But now they were compelled to encounter new troubles. The king, by an order in council, had transferred their territory from the jurisdiction of New Hampshire to that of New York, and the government of New York had construed the order as confirming the title to their lands in that province. The title of the settlers was thus called in question, and it became apparent that they must either purchase their lands anew, or abandon their improvements to the mercy of the New York claimants. There was, indeed, one other alternative, and that was to defend their possessions by force, if it should become necessary. That alternative they adopted. A general history of the controversy with New York, which was the result of this determination, has already been given in the second part of this work, and will not be repeated here. But since Bennington was, in fact, through the whole controversy, the head quarters of the opponents of New York, the place where their plans of operations were

generally devised, and whence issued their resolves and orders, and a large share of the physical force which carried them into effect, some notice of this controversy seems to be necessary in an account of this town. There were some circumstances in the controversy with New York, peculiar to the claims of the settlers in Bennington, or, rather, to a portion of them. In other places the grants of the governor of New Hampshire were of earlier date than those under New York; but in Bennington several thousand acres of the land were alleged to have been granted by New York about ten years before the charter under New Hampshire. This grant bore date June 15, 1739, and was called Wallum's patent, or, in the Dutch language, Wallumschaik, the termination *chaik* signifying scrip or patent. It was pronounced *Walloomscok*, and gave the name to the stream, on both sides of which it was alleged to extend from about a mile west of Shaftsbury west line, up to about the centre of Bennington. It grew narrow as it extended up the river. This was the claim made by the patentees. The New Hampshire settlers disputed the extent of the patent, alleging that it included only about 40 acres of the northwest corner of the town. It seems probable the New York claimants were right in regard to the boundaries of the patent, but the New Hampshire men were the first occupants. The inhabitants of Bennington were also charged by "the Yorkers" with having located their charter some three miles further to the west than its terms warranted. In a publication of the New York claimants made in 1773, it is stated that "the grantees of the township of Bennington discovered that the situation of the tract according to the intention of the grant, would be both inconvenient and unprofitable, as it included a large proportion of mountain, and that they therefore by no other authority than a vote of their town meeting, presumed to extend it to the westward, to within 17 miles of Hudson's river." This charge is no doubt unfounded, at least, to the extent in which it is made. The average distance of the town from the river is now about 20 miles. There is, nevertheless, a tradition that when the proprietors found that the eastern part of the town embraced a portion of the Green Mountains, and that the unoccupied lands adjoining the west line were mostly valuable, they determined to remove the township one tier of lots, or about half a mile to the west. This tradition is countenanced by a record of a proprietors' meeting, held September 29, 1762, which

*See part second, page 176.

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is as follows, viz: "*Voted*, that each man that owns the rights in the east range of rights in the town of Bennington shall have the liberty of removing the easterly half mile of said rights over to the west side in said town opposite to them." If, as this vote would seem to indicate, the west line of the town was removed, it had the effect to add a strip of half a mile in width and about fifty in length to the state,—the west line of Bennington having been the basis of the surveys of all the western towns, from Pownal north to Poultney river. In June, 1765, a Capt. Campbell, in attempting to survey "the old patent," as that of Walloomscoik was called, came on the land of Samuel Robinson, where he was met by him and others in his employment, and forcibly driven off. Robinson, with two others, was indicted for a riot in the court at Albany, was arrested and after being confined two months in Albany jail, was released on the payment of a fine. This was the first of that series of indictments with which the settlers were harrassed for many years. In the fall of 1766 Capt. Robinson went to England as an agent for the settlers on the grants, where he died the succeeding year.* The Yorkers, considering their claim under "the old patent" as standing on stronger grounds of equity than those under more recent grants, prosecuted it with more zeal; and the New Hampshire men, believing that the success of their antagonists under that claim would be the forerunner of success in all the others, resisted it with equal vigilance and ardor. Several efforts had been made to survey the patent, but, for some reason or other, they had proved unsuccessful. In the fall of 1769 a renewed attempt, with a large party, was made, but with no better success than before. It happened, whether accidentally or otherwise, cannot now be known, that on the very day the survey was to be undertaken, a large number of the inhabitants had assembled on the farm of James Breakenridge, to assist in harvesting his corn. While they were thus employed, the surveyors made their appearance. A long conversation ensued, which, without the application of force, resulted in the abandonment of the attempt, on the part of the surveyors. It is probable they saw reason to apprehend danger if they persevered, and therefore desisted.† The result of the trials at Albany in July, 1770, gave new confidence to the Walloomscoik proprietors, who undertook another survey the following September, but the surveyors were met by a number

of the settlers, and threatened so decisively with violence in case they continued their work, that they were very willing to abandon it. This produced another complaint to the governor and another proclamation for apprehending rioters, among whom were named Simeon Hatheway, Moses Scott, Jona Fisk, and Silas Robinson, who are described as "principal authors and actors in said riot." On the 29th of November, the Sheriff of Albany county, by the aid of "the infamous John Munro," as he is called in Ethan Allen's publications, succeeded in arresting Silas Robinson, and in hurrying him off to Albany before his neighbors could come to his rescue. Robinson was indicted as a rioter and confined in jail till October of the next year, when he was released on bail.* Since the recovery of judgment in ejectment by the Walloomscoik proprietors against James Breakenridge, the sheriff of Albany county had made several unsuccessful essays to put the plaintiffs in possession of the lands recovered. It was therefore determined, by the advice of the governor and council, that the *posse*, or in other words the militia of Albany county, should be called out to aid the sheriff in executing his writ. Early in July, 1771, an attempt was made to carry this determination into effect, the result of which has been given in part second, page 21. About this time one Hazard Wilcox, who lived in Hoosic, on Walloomscoik patent, undertook, with several others, to build a house in the extreme northwest corner of Bennington, on the forty acres which were within the acknowledged limits of the patent. They built the body of the house with logs, and had raised the rafters, but the "Hampshire men" drove off the party, tore down the house, and cut up and burnt the materials. This Wilcox, who was an active "Yorker," afterwards became a tory, in the first year of the war, and when some of his neighbors undertook to break into his house and arrest him, he struck one Perry violently on the breast with a heavy piece of wood, and killed him. Upon which Wilcox fled and never returned. These were the last attempts of the Yorkers to take forcible possession of lands in Bennington. But their attempts were often made in other places; and as the inhabitants of Bennington had been first assailed by the land jobbers and had successfully resisted them, they were naturally looked to for counsel and aid by the settlers in other towns; and this counsel and aid were promptly given. The opposition to New York became known

* See part second, page 19. † Ibid. page 20.

* See part second, page 21.

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in that province as the "Bennington mob;" and it became the policy of the governor to represent to the public and to the crown, that the opposition to that province was produced by a few ambitious and lawless inhabitants of Bennington. Immediately after the visit from the posse, the people of the grants began to form their voluntary associations for military discipline, under the denomination of "Green Mountain Boys." The union of the several towns on the west side of the mountains, through conventions of their agents and committees, became more compact and efficient; and from this period the events connected with the New York controversy, properly belong to the general history of the state, to which the reader is referred in part second. It may, however, be mentioned that among the relics of this period which still remain at Bennington, is "the big cannon," a heavy iron 6 pounder, which was brought from the fort at east Hoosic in 1772, for the purpose of being used in the defence of the grants against an expected invasion of the British regulars under governor Tryon. It was kept in town and occupied a position, perhaps, "more for ornament than use," at Stark's encampment before the battle of Bennington. The terms on which the piece was obtained from the fort, are not known; but its rather uncertain ownership has occasionally, for many years past, afforded an excuse for the young men and boys of several of the neighboring towns in this and the adjoining states of New York and Massachusetts, to exercise their powers in stealing it back and forth from each other; in which thieving operation they have sometimes, when stimulated by the approach of a celebration of the anniversary of independence, or of Bennington battle, exhibited a skill and adroitness that might have won the approbation of a Spartan father. The people of Bennington never at any time recognized the jurisdiction of New York. All the warnings of their town meetings, up to Dec., 1769, are entitled "Province of N. H." Those of a subsequent date, until the state established a regular government in 1778, are entitled simply "town of Bennington," without any designation of province or state. The people of Bennington took an early and active part in favor of American liberty. Here was held the council of Allen, Easton, Warner and others, in which the expedition to Ticonderoga was planned, in May, 1775; and a considerable portion of the Green Mountain boys, who joined the expedition, were from this town. Throughout the war the people of Ben-

nington furnished their full share of men and supplies for carrying it on. Bennington was for sometime a depot for provisions and public stores belonging to the United States. To obtain possession of these provisions and stores was the principal object of Burgoyne in sending his expedition to Bennington, which terminated so unfavorably to him, and so gloriously to the American cause, by the victory, at this place, of August 16th, 1777.*

Some of the most prominent of the early inhabitants of Bennington deserve a passing notice. *Samuel Robinson, Sen.*, who died in England in 1767, has already been mentioned. Next to him, among the first settlers, was *James Breakenridge*, who was a large land holder, owning a considerable tract in the northwest part of the town. He had been a lieutenant in the French war, and was an active and useful man. He was sent to England, with *Jehiel Hawley*, of Arlington, as an agent for the settlers in the fall of 1772, and returned the next year. *Seth Warner* is too well known to require any thing to be said of him. He came to Bennington early, was an active and efficient opponent of the Yorkers, was Colonel of a Continental regiment throughout the war, and died at Woodbury, Connecticut, soon after its close.† *Ethan Allen* resided in Bennington for two or three years previous to the war, and also for a time after the peace.‡ *Moses, Samuel and Jonathan Robinson*, sons of *Samuel Robinson, Sen.*, were prominent men. *Moses Robinson* was the first colonel of militia in the state, and with his regiment was often in active service during the war. He was afterwards chief judge of the supreme court, governor of the state and senator in Congress. He died in 1813. *Samuel Robinson* was an active and prominent military man in the state service, and became colonel of the militia when that post was of more importance than it is reckoned at present. He commanded one of the Bennington companies of militia in Bennington battle, and *Capt. Elijah Dewey* commanded the other. *Jonathan Robinson* became chief judge of the supreme court, and a senator in Congress. *John Fassett and Stephen Fay* were among the early leading men of the town. *John Fassett, Jun.*, was also a prominent man, and held the office of judge of the supreme court for several years. *Dr. Jonas Fay*, son of *Stephen*, held many important posts in the state, and was a noted and useful man, as was also his brother *Jo-*

* For a full account of the Bennington battle, see part second, page 45.

† See part second, page 20. ‡ Ibid.

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seph Fay. Theodore S. Fay of New York, a popular writer of the day, and secretary of Legation at Berlin, is a grandson of Joseph Fay. *David Fay*, another son of Stephen, was United States Attorney for the Vermont district under Mr. Jefferson, and afterwards judge of the supreme court. *Isaac Tichenor* came to Bennington in 1777, as a deputy commissary of purchases under the United States—was a member of the assembly in 1781, and for several successive years; afterwards was a member of the council, judge of the supreme court from 1791 to 1795, a senator in Congress in 1796, governor of the state from 1797 to 1807, and also in 1809, and again a senator in Congress from 1814 to 1820. He died in 1840 at the age of 85. The family of Saffords were also leading men. *Samuel Safford* was major in Col. Warner's Continental regiment, and served through the war. He was afterwards a prominent and useful man in civil life. The first representatives of the town in the general assembly, chosen the first Tuesday of March, 1778, were Nathan Clark and John Fassett. Nathan Clark was the first speaker of the house. He had been a leading man in committees of safety and conventions for several years. The representatives chosen on the first Tuesday of Sept. 1778, were John Fassett and Ebenezer Walbridge. The latter was colonel of the militia about this time, and afterwards became brigadier general. He was an active and prominent man.

Bennington, by the N. Y. organization, was included in the county of Albany. In 1779, when Vermont became organized, it was made a half shire town of Bennington county, and has continued such ever since. A court house and jail were built here at an early day. There have been two public executions in this town, one of David Redding for "enemical conduct" in 1778; and the other of Archibald Bates for murder in Feb., 1839.*

About one quarter of the township is mountainous. The residue is feasible upland, with a considerable quantity of alluvial. The soil is rich and productive, perhaps equal to any in the state. Wheat was formerly raised in abundance, but for many years has been an uncertain crop, and has ceased to be cultivated, except in very small quantities. The productions are principally corn, rye, oats, hay, butter, cheese, beef, pork, and poultry, which generally find a ready market among the manufacturing and mechanical population of the town; for which reason the business of wool-growing has not been ex-

tensively introduced. Bennington is connected with Troy, the head of the Hudson steam boat navigation, by a good macadamized road, the distance being 30 miles. The Walloomscoik and its branches furnish water power, which is improved to a considerable extent; whence have sprung up several manufacturing villages, which with the old village will require separate notices.

Bennington Centre, or the old village of Bennington, has seventy-five dwelling houses and about four hundred inhabitants. The public buildings are a Congregational meeting house, a court house and jail, and two academies. It has also the post office, a bank, three taverns, five stores, seven law offices, a printing office, and mechanics shops, of various descriptions. It is a place of considerable capital and business; but like most old villages in New England, having been begun on high ground, a portion of the business, of which it would otherwise have been the centre, has departed to more fortunate locations on the streams. This village was the centre of operations of the people of this state, against the Yorkers, and also against the common enemy, during the revolution. The councils of the leaders were held at the Green Mountain tavern, kept by Stephen Fay; the sign to which was the stuffed skin of a catamount, placed on a post twenty-five feet high, with its jaws distended, and teeth grinning towards New York.* Here were determined the most important public concerns; and here decided the fate of those accused of offences against the people. Many a luckless Yorker had reason to rue the day he was summoned to trial at the sign of the catamount; and many an unfortunate tory has departed from its council room, thanking his stars that he had been suffered to escape with his life, though at the expense of a confiscation of his property. The house is now occupied as a private dwelling by Samuel Fay, Esq. a descendant of the first proprietor. The battle ground is situated about 7 miles northwest of this village, on the Walloomscoik river, in the town of Hoosic, New York.

The Congregational meeting house is a fine wooden building, and was erected in 1804. Until about the year 1830, it was the only house for public worship in town. Now there are seven others. The first emigrants to Bennington were Congregationalists; and it is related of Samuel Robinson, the principal proprietor, that when persons came to town to purchase land, it was his practice to invite them to

* For particulars see part second, page 121.

* See part second, page 31.

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his house over night. In the course of the evening he contrived to ascertain their religious views. If he found they did not correspond with his, he persuaded them to settle in Shaftsbury, of which he was also a proprietor. By this means the settlers of Bennington were nearly all of one religious faith; and they continued so, with some exceptions, to a late period. This attempt to preserve uniformity of religious sentiment was doubtless designed to promote the harmony and consequent happiness of the town. But it is questionable whether it had that effect. While but a single church existed, it was often divided into parties, sometimes of a most bitter character, whose influence extended throughout the town, and produced violent animosities and heart burnings. The party in the majority was generally intolerant, and both parties bigoted and uncharitable. Since other churches have been established, more liberal religious, as well as kinder, social feelings have prevailed. The first pastor of this church, as has been before stated, was the Rev. Jedediah Dewey, who was settled in 1763, and died December 21, 1778. The Rev. David Avery was settled May 3, 1780. He had been a chaplain to General Learned's brigade of the army, and resigned that situation when he received a call from this church. He did not give general satisfaction and was dismissed, May 27, 1783. The Rev. Job Swift was settled February 27, 1786, and continued in charge of the church till June 7, 1801. The Rev. Daniel Marsh next became pastor about 1806, and continued such until April 25, 1820. The Rev. Abaalom Peters was ordained July 5, 1820, and released from his charge December 14, 1825. The Rev. Daniel A. Clark was pastor from June 13th, 1826, to October 12, 1830. The present minister, the Rev. Edward W. Hooker, was settled February 22, 1832. The church, by the separation of a portion of its members to form two other churches, has become much weakened, though it is still the largest, and has the most numerous and wealthy congregation of any in the town. One of the academies in this village, was erected in 1821, and the other in 1829. They were for five or six years rival institutions, and were in a flourishing condition; but since 1837, permanent schools have not been maintained in either. The village is well situated for an institution of this description, and Mr. Horace Fletcher has lately commenced a school in one of the buildings, with a fair prospect of success.

Bennington East Village, situated about

a mile and a half east of the old village, contains 140 dwelling houses and about 700 inhabitants. Its public buildings are four churches and an academy. It has a woollen factory, employing eight or ten hands; two wadding factories, which manufacture from 70 to 80 thousand dozen sheets per annum, valued at 20 to \$25,000; two cupola furnaces which make from eight to ten tons of castings—such as stoves, mill-irons, ploughs, &c.—per week; three tanneries that prepare for market 3000 hides annually; a stone and earthen ware factory, employing from 12 to 15 hands; and an establishment for making fire bricks, which produces about \$5,000 worth per annum. The fire bricks, for the composition and manufacture of which a patent has been obtained, are composed principally of kaolin and pulverized quartz, which are found in abundance in the east part of the town. The bricks are used in blast and cupola furnaces, glass ovens, and for other purposes where a substance capable of resisting a high heat is required. For most purposes these bricks are preferred to any imported. This village has also, besides great numbers of mechanics' shops, a grist-mill, saw-mill, oil-mill, 8 stores, 3 taverns, a printing office, and 3 law offices. The Baptist meeting house is a neat wooden building, and was erected in 1830; the church having been organized, April 11, 1827. The Rev. Henry F. Baldwin was pastor from June, 1828, to October, 1830. The Rev. Thomas Teasdale succeeded him and continued his labors till February, 1832; when he was succeeded by the Rev. Jeremiah Hall, who remained till 1836. The Rev. Mr. Willis came next, and continued one year, when he was succeeded by the Rev. S. Hutchins, the present pastor. The Methodist meeting house is a stone building, erected in 1833. The church was organized in May, 1827. The following named clergymen have been successively stationed here, with the church since May, 1827, each for two years, to wit: the Rev. Cyrus Prindle, John M. Weaver, Wright Hazen, Henry Burton, Henry Smith, — Hubbard, and C. R. Wilkins. The present minister is the Rev. Jesse Craig. An Episcopal parish was organized here July 24, 1834, by the name of *St. Peter's Church*, under the ministry of the Rev. Nathaniel O. Preston, and a church edifice built of brick in 1836, which was consecrated July 22, 1839. This church is still under the pastoral care of the Rev. N. O. Preston, and though small, consisting of only 20 communicants, is regarded as in a prosperous condition. The Congregational

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meeting house was built in 1839. The church, being a colony from the old centre church, was organized April 26, 1836. Rev. Aretas Loomis the present minister, was settled soon after the organization of the church.—Union Academy is a flourishing institution, under the patronage of the Baptist denomination. It is at present under the charge of W. G. Brown and W. A. Fisher.

Bennington *Iron Works* are situated near the east line of the town, about three miles from the centre village. They consist of three large blast furnaces, which produce from two to three thousand tons of pig iron per annum, giving employment to 150 or 200 hands, and from 40 to 50 teams. The ore is obtained in about equal quantities from two beds; one, half a mile from the works, and the other about six miles distant in the west part of the town. The ore yields about 50 per cent of pure iron. The descent from the surface of the ground into the west ore-bed is by means of a windlass through a perpendicular shaft 70 feet in depth. From the bottom you may travel by candle-light through its subterraneous passages for several hundred yards.

North Bennington is situated about four miles northwest of the court house, on Paran creek, a branch of the Walloomscoik. It has 50 dwelling houses and about 300 inhabitants, a post office, tavern, five stores, two cotton and one woollen factories, two establishments for making carpenters' steel squares, a grist mill and saw mill. One of the cotton factories, which was the first that was put in operation in the state, has 1280 spindles and 36 power looms, employing about 40 hands, and manufactures 450,000 yards of shirting per annum. The other factory, more recently erected, makes sheeting exclusively; its productions being about equal to the first. The woollen factory is on a small scale. The business of manufacturing carpenters' squares, was commenced in this village in 1820, and was the first establishment of the kind in the United States. The article is much superior to any imported, and has nearly superseded foreign squares in market. There are now two establishments in the village, capable of turning off 50 finished squares per day, or from 12 to 15,000 annually. The village has also a Universalist meeting house, built in 1836. The Rev. G. Leach and the Rev. Wm. Bell have successively officiated as clergymen. There is at present no resident minister. There is also a Baptist meeting house about three-fourths of a mile north of the village, within the limits of Shaftsbury.

Hinsdillville is about a mile south of North Bennington, at the junction of Paran creek with the Walloomscoik. It has three cotton factories, and until within three or four years past was a busy and flourishing village; but the works are not now in operation. On the 29th of October, 1834, a portion of the old centre church formed themselves into a new church, adopting the Presbyterian mode of government, and, in 1835 erected at this place a neat stone house for worship. The Rev. Mr. Kenney, the Rev. Mr. Johnson, and the Rev. Mr. Nott have successively been the pastors of the church. It has at present no minister.

Irish Corner is three quarters of a mile below Hinsdillville, at which are a tavern and store, and also a cotton factory, not now in operation. Between this and Hinsdillville is a small Methodist chapel, built in 1836.

Walbridgeville, about three quarters of a mile above Hinsdillville on the Walloomscoik, has two paper mills where paper is extensively manufactured by approved modern machinery. It has also a saw mill and a small woollen factory.

Iron ore is found in several places in this town. The oxyde of manganese, of the variety called the earthy oxyde, is also found in connexion with brown hematite. Its color is brownish black. Radiated and compact varieties also occur. It is very abundant. The yellow oxyde of iron, or yellow ochre is also found in abundance in this town. It is a good article for common uses, and about 100 tons are annually prepared and sent to market. Marble, magnesian limestone, argillaceous slate, and hornstone are also found. The marble is worked, but not to a large extent. Mount Anthony, in the south west part of the town, is a considerable elevation. On the east side of the mountain, a mile from the centre village, is a cavern, which is a considerable curiosity. Stalactites are suspended from the roof, and also incrust the sides of the cave. *Statistics of 1840.*—Horses, 692; cattle, 2,669; sheep, 9,578; swine, 2,138; wheat, bu. 2,185; barley, 939; oats, 30,399; rye, 3,852; buck wheat, 1,213; Indian corn, 16,000; potatoes, 56,475; hay, tons, 564; sugar, lbs. 7,828; wool, 26,327. Population, 3429.

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BENNINGTON COUNTY lies in the south-west corner of the state, and is bounded north by Rutland county, east by Windham county, south by Berkshire county, Mass., and west by Washington and Rensselaer counties, N. Y. It is situated between 42° 44' and 43° 18' north lat. and between 3° 46' and 4° 14' east long. and

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is 39 miles long and 20 wide at the north end. It contains about 610 square miles. The earliest permanent settlements, on the west side of the mountain, in Vermont, were made in this county. During the revolution, most of the settlements north of the county of Rutland, were abandoned, and the inhabitants retreated into these two counties. It was in Bennington county that the councils of safety held most of their meetings. A considerable part of the county is mountainous and broken. The waters flow from it in all directions. From the southeast part they fall into Deerfield river, and from the southwest into Hoosic river. The Battenkill receives most of the waters from the north part, but some fall into West river, some into Otter creek, and some into Wood creek. The land, except on the mountains, is excellent for tillage and produces fine crops. The streams afford many valuable mill and other water privileges. There is a range of granular limestone or marble extending through the county from south to north, which is wrought in several places. Its color is usually white. Iron ore is abundant, and lead has been found in small quantities. The principal towns are Bennington and Manchester, which are the shire towns. The Supreme Court sits alternately at these places on the 2d Tuesday after the 4th Tuesday in January. The County Court sits at Manchester, on the 2d Tuesday in June, and at Bennington, on the first Tuesday in December. *Statistics of 1840.*—Horses, 3,397; cattle, 16,879; sheep, 104,721; swine, 9,906; wheat, bu. 12,959; barley, 1,540; oats, 137,837; rye, 25,671; buckwheat, 16,071; Indian corn, 70,246; potatoes, 564,279; hay, tons, 42,907; sugar, lbs. 180,986; wool, 223,674; iron, tons, 1,829; furnaces, 5; woollen factories, 4; cotton, 3; population, 16,879.

Benson, a post town in the western part of Rutland county, in lat. 43° 42', and long. 3° 46'. It is bounded north by Orwell, east by Hubbardton, and a small part of Sudbury and Castleton, south by Fair Haven and West Haven, and west by lake Champlain, being opposite Putnam, in Washington county, N. Y. It lies 12½ miles east of north from Whitehall, N. Y., 25 miles north of west from Rutland, and 25 west of south from Middlebury. Benson contains 25,214 acres, was granted October 27, 1779, and chartered to James Meacham and Ezekiel Blair, May 5, 1780.* The settlement of the town was commenced 1783, by Messrs.

*The name was given by Mr. Meacham in honor of a revolutionary officer by the name of Benson, for whom he had great respect.

Barber, Durfee, and Noble. Mr. Durfee came into town and made some improvements before the revolution, but was driven off. The town was organized about the year 1786, and Allen Goodrich was the first town clerk, and Chauncey Smith first representative. In 1790, a congregational church was organized here, over which the Rev. Dan Kent was ordained, September 5th, 1792. Since that time, besides several partial awakenings, there have been three very general revivals of religion. The first began in 1804, and during this and the succeeding year, 160 were added to this church; the next was in 1816, when 130 were added to the church, and the third in 1821, when there was an addition of 160 members. During the last 9 years the church has been much diminished by emigration. It has formed one entire colony, which removed in the spring of 1832 and settled on the Du Page river, about 25 miles west of Chicago, Ill. Many more have since emigrated to that and other places at the west, so that, although 261 members have been added, since the settlement of the present pastor, to the 218 then belonging to this church, the present number is only 240. Of the above additions to the church, about 120 were in 1820, '30, and '31. The Rev. Dan Kent was dismissed, July 11, 1828, and died July 21, 1835. The Rev. D. D. Francis, the present pastor, was ordained July 29, 1829. The Congregational meeting house is a handsome building, 66 feet long, 42 wide, standing in a small but pleasant village near the centre of the town, and was completed about the year 1800. There is a small Baptist church which was organized at an early period, which is under the pastoral care of the Rev. Robert Bryant. They erected a neat and commodious house of worship in the village in 1841. The Methodist church, consisting of 90 members, also erected a convenient house of worship in 1841 in the village. The Rev. S. Stiles is their present preacher. The canker rash prevailed in this town about the year 1796, and was very mortal. The epidemic of 1812 was also very distressing. It carried off 60, nearly all heads of families, in the space of 60 days. The practicing physicians are Doctors Cooley, Ransom, and Howard. Hubbardton river runs through the easterly part of the town, affording several good mill privileges. In the N. E. corner is a considerable pond of clear water, which abounds with trout, and discharges its waters into Hubbardton river. The town is well supplied with agreeable and wholesome water. A few springs are slightly impregnated with medicinal pro-

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perties, one of which is becoming a place of resort for invalids. The timber is beech, maple, pine, and hemlock, interspersed with oak, ash, and walnut. The soil is mostly clay. A range of slate from 1 to 2½ miles wide, passes through the town from north to south, furnishing a good share of upland for tillage. About a quarter of a mile N. E. from the meeting-house is a bog of marl, which might be mistaken for fuller's earth. In the S. W. part of the town is a swamp, from which a stream issues, and, after running a short distance, passes under a considerable hill. It runs completely through the base of the hill, a distance of more than half a mile. The mean width of the lake, on the west line of the town, is about half a mile. The widest place is one mile and a half, and is just north of Stoney Point landing, which is situated about the middle of the west side of the town. There are two landing places, Kinyan's bay and Gibbs' landing, where the steamboats touch for passengers, and where store houses are erected. The village is pleasantly situated in a valley near the centre of the town. There are in town 12 common and one select school, 2 grist mills, 9 saw mills, 1 fulling mill, 3 stores, 4 taverns, and 1 tannery. *Statistics of 1840.*—Horses, 261; cattle, 1,807; sheep, 20,527; swine, 663; wheat, *bu.* 2,578; oats, 3,324; rye, 1,385; buckwheat, 649; Indian corn, 5,353; potatoes, 15,700; hay, *tons*, 5,592; sugar, *lbs.* 6,285; wool, 49,048. Population, 1403.

BENTON'S GORE is a tract of 5000 acres, lying in the southwestern part of Windsor county, now forming the westerly part of Weston, granted to Samuel Benton and 23 associates, October 26, 1781.

BERKSHIRE, a post town in the northeast part of Franklin county, in lat. 44° 58' and long. 4° 16', containing 36 square miles. It is 50 miles northwesterly from Montpelier, and 39 northeasterly from Burlington, and is bounded north by St. Armand in Canada, east by Richford, south by Enosburgh, and west by Franklin. This township was granted to Wm. Goodrich, Barzilla Hudson, Charles Dibble, and their associates, March 13, 1780, and was chartered by the name of Berkshire, June 22, 1781. The settlement of this town was commenced in 1792 by Job Barber. Stephen Royce, who was also one of the first settlers of Franklin, Daniel Adams, Jonathan Carpenter, and Phineas Heath, moved their families here in 1793, and from this time the settlement advanced with considerable rapidity. Elihu M., son of Stephen Royce, was born in 1793, and was the first child born in town. The town was organized in 1794,

and David Nutting was first town clerk. The town was first represented, in 1796, by Stephen Royce. The religious denominations are Congregationalists, Methodists, Baptists, and Episcopalians. There are two Congregational churches, one in East and the other in West Berkshire. The former was organized, Oct. 8, 1820, and has a house of worship; the other many years earlier, and has a share in a house of worship. The Episcopal church, called *Calvary Church*, is in East Berkshire, and was organized about 1820. Their house of worship was consecrated Oct. 1, 1823. The ministers who have labored in this parish are the Rev. J. Clap, Rev. J. Gray, Rev. R. Peck, Rev. L. McDonald, and Rev. J. Obear. Present minister, the Rev. Moore Bingham. Communicants, 56. Missisco river runs through the southeast corner of the town, and receives Trout river near the line of Enosburgh. On these streams is some fine intervalle. Pike river enters the township from Canada, and, after taking a circuit of several miles, and affording here some of the finest mill seats in the country, returns again into Canada. On Pike river, in this town, are several mills. The soil is various, but generally good. Its surface is diversified with gentle swells and vales, but does not rise into mountains. It is well watered with brooks. The timber is mostly beech, maple, bass, elm, and hemlock. The rocks abound with epidote. There are 1 grist mill, 4 saw mills, and 1 fulling mill. *Statistics of 1840.*—Horses, 298; cattle, 1,902; sheep, 3,788; swine, 532; wheat, *bu.* 3,884; barley, 53; oats, 5,746; rye, 52; buckwheat, 735; Indian corn, 2,876; potatoes, 67,995; hay, *tons*, 3,818; sugar, *lbs.* 31,785; wool, 9,457.—Population, 1818.

BERLIN, a post town in Washington county, lying nearly in the centre of the state, in lat. 44° 13' and long. 4° 25'. It is bounded north by Montpelier, east by Barre, south by Northfield and a small part of Williamstown, and west by Moretown. It was chartered June 8, 1763, to C. Graham and others, and contains 36 square miles. The settlement was commenced in 1785, near the mouth of Dog river, by Ebenezer Sanborn, from Corinth, and Joseph Thurber from New Hampshire; both of them removed the next year to Plattsburgh, New York. In January, 1786, Moses Smith from Granby, Massachusetts, commenced in the southeast corner of the town, supposing that he was in the north west corner of Williamstown. In May, Daniel Morse and family, from Washington, and in July, Jacob Fowler, from Corinth, removed to the settlements

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commenced the year before by Messrs. Sanborn and Thurber. Mr. Fowler was the first settler who resided here permanently, or whose descendants lived in town. In addition to the above, Capt. James Hobart, Hezekiah Silloway, Wm. Flagg, Jacob Black, Eleazer Hubbard, Zachariah Perrin, David Nye, Elijah Nye, Jabez Ellis, Aaron Strong, Joshua Bayley, John Taplin, and James Sawyer may be mentioned as among the early settlers of the town. The number of families in town in 1790, was 21; in 1795, 65; in 1798, 85. There was nothing remarkable attending the first settlement of this town but what was common in the first settlement of others. The town was organized March 31, 1791. David Nye was first town clerk, and John Taplin first representative. Abel Knapp was chosen town clerk in 1795, which office he has held till the present time, with the exception of one year (1815). The people of this town are mostly engaged in agriculture, being so situated that it is more convenient for them to patronize the tradesmen and professional men of other towns than their own. The religious societies are Congregationalist, Methodist and Universalist. Rev. James Hobart was settled over the Congregationalist society in 1798, and dismissed in 1829. Rev. Austin Hazen was settled in 1837, and still continues their pastor. The first meeting house was erected 1801, and burnt in the winter of 1837. A "union house," owned principally by the Universalist and Methodist societies, was erected in the south part of the town, and a Methodist house a little east of the centre in 1837, and a Congregationalist house at the latter place in 1838. The town is watered by Winooski river, which forms a considerable part of the northern boundary; Dog river which runs nearly north through the western part of the town; Pond brook near the centre, and Stevens' branch, which runs across the northeast corner. Before any settlements were made in this vicinity, a hunter by the name of Stevens, from the east part of the state, was found dead in his camp on the bank of this stream near its mouth, and was buried there; hence its name. In 1812, Mr. Daniel Thompson, while digging a ditch on his farm, ploughed up human bones, which were supposed to be those of Stevens'. They were carefully collected and buried.* Berlin Pond is a little southeast of the centre of the town. It is in two bodies of water, being connected by a narrow neck;

is about two miles long and half a mile wide. The fish in this pond are principally *pickerel*. When the settlement of this town was commenced, the dace was the only fish found in this pond. About 1803, some trout were put into it, and in the course of a few years became quite plentiful, some of them weighing 4 or 5 pounds. Pickerel were afterwards introduced, and as these have multiplied the others have disappeared. There is a medicinal spring in the northeast corner of the town and another in the west part, but they have not gained much celebrity. The town is somewhat broken, yet it contains much very good and handsome tillage land. There is considerable interval on Winooski and Dog river and Stevens' branch. The timber, west of Dog river, is a mixture of spruce, hemlock, maple, beech, birch, basswood, and ash; east of that, principally hard wood, excepting in the vicinity of the pond and streams. On a ridge of land south of the centre, is some butternut, and east of the pond, considerable cedar and fir. Iron ore has recently been discovered a little east of Dog river, near which place *terre de sena* has been found of good quality. The town has been generally very healthy. Occasionally typhus fever, scarlet fever, whooping cough, &c. have been epidemics. The epidemic of 1813 prevailed to some extent, and was fatal in quite a number of cases. We find on record the following list of birth and deaths, in this town, from 1799 to 1813, inclusive:

Year.	Births.	Deaths.	Year.	Births.	Deaths.
1799	36	7	1807	45	12
1800	34	2	1808	50	15
1801	43	12	1809	37	14
1802	36	25	1810	35	19
1803	37	11	1811	47	22
1804	38	13	1812	36	13
1805	28	10	1813	43	30
1806	39	6			

There is a small village a little east of the centre of the town containing from 15 to 20 dwelling houses, 2 meeting houses, a store, tavern, post office, grist and saw mill, starch factory, and several mechanics. There are 13 school districts and 13 school houses; 1 mercantile store, 1 machine shop, 5 carpenters and joiners, 4 blacksmiths, and 8 shoemakers. *Statistics of 1840.*—Horses, 414; cattle 2,266; sheep, 7,097; swine, 956; wheat, bu. 2,510; barley, 110; oats, 20,335; rye, 155; buck wheat 1,915; In. corn, 7,182; potatoes, 83,734; hay, tons, 1,232; sugar, lbs. 29,175; wool, 14,647. Population, 1598.

H. H. D.

* There is a notice of this in the first edition of the Gazetteer, under the name of Barre. He died in this town and it is supposed that his camp was on the farm owned by Mr. Thompson.

BERNARD.

BERNARD the charter name of Barnard.
See Barnard

BETHEL, a post town in the western part of Windsor county, in lat. 43° 50' and long. 4° 21'. It is bounded northerly by Randolph, easterly by Royalton, southerly by Stockbridge and a small part of Barnard, and westerly by Rochester, and is 30 miles south from Montpelier, and the same distance northwest from Windsor. An association was formed at Hanover, N. H. December 29, 1777, for the purpose of making a "settlement on White river and its branches." They accordingly petitioned the legislature of Vermont, in March 1778, for the grant of a township to be called Bethel, in which they say that they "understand that said lands were granted by the late governor of New York counter to the royal proclamation, to certain persons, the greater part of whom have now put themselves under the protection of the enemies of the American states." A grant was obtained March 18, 1778, and the township was chartered to John Payne, John House, Dudley Chase, and others, Dec. 23, 1779, containing 36 square miles. This was the first township chartered by the government of Vermont. The settlement of this town was commenced in the fall of 1779 by Benjamin Smith. The next year he was joined by Joel Marsh, Samuel Peak, Seth Chase, Willard Smith, and David Stone. Asa, son of Benjamin Smith was born September 6, 1780. He was the first child born in the town and is now living here. David Stone was taken prisoner by the Indians at the time of their descent upon Barnard, August 9, 1780. A small stockade fort was built here at the commencement of the settlement. It stood at the lower end of the west village on the north side of the river, and the garrison was commanded by Captain Safford. The town was organized in 1782, and Barnabas Strong was first town clerk. The religious societies are Congregationalists, Episcopalians, Universalists, Baptists and Methodists. The Rev. Thos. Russell was settled by the Congregationalists in 1790, and dismissed in 1794. From that time they had no settled minister till March 22, 1837, when the Rev. Benjamin Abbot was installed and he is their present minister. They have a neat well finished house of worship, erected in 1835. The Episcopal church was organized by the Rev. John E. Ogden in 1792, and received the name of *Christ's Church*. From this time up to 1821, this parish had the occasional services of the Rev. Mr. Ogden, the Rev. Bethuel Chittenden, the Rev. Russell Catlin, and the Rev. George

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Leonard. Bishop Chase of Illinois also did much good here as a lay reader. In 1821, the parish was regularly organized, and from 1822 to 1830, the Rev. Joel Clap officiated here about one half of the time. The Rev. James Sabine, the present rector, commenced his labors here in the fall of 1830, and was instituted August 11, 1831. The parish has lost many members by emigration—27 in one year. They have a commodious church and valuable parsonage, the former erected in 1823, and consecrated June 23, 1824. During Mr. Sabine's ministry there have been baptized, 68; confirmed, 75; present communicants, 100. The Universalist society was organized in 1819. In 1821 they settled the Rev. Kittridge Haven, who remained till 1827. They were then without a settled minister till 1832, when the Rev. Eri Garfield, the present minister, was settled. Their house of worship is of brick, built in 1816, and situated in the west village. There are at the east village a Methodist and a Baptist society, and a Methodist society in the north part of the town. Each of these denominations has a convenient house for worship. The most common diseases are the typhus and lung fevers and dysentery. Typhus fever prevailed here with great severity in 1798 and in 1800. Dysentery also produced considerable mortality in 1798 and again in 1822. But the spotted and lung fevers of 1812 and 1813 were much the most fatal diseases which have prevailed. A Mr. Banister died here about seven years ago, aged 103. The surface of the town is broken, but the soil is, in general, very warm and productive. Timber on the hills, hemlock and spruce; on the low lands, principally beech, birch and maple. This is an interesting field to the geologist. Between the second and third branch are three distinct formations of rock—slate, granite and lime. The slate dips to the north and is quarried for underpinnings, posts, &c. Steatite, or soapstone, of good quality is abundant in the west village, and also in the westerly part of the town, and is considerably used for fire-places, stoves and other purposes. Precious garnets in small but perfect crystals, and acicular crystals of hornblende are common in mica slate. The principal streams are White river, which runs across the southeast corner and its second and third branches. The second branch but just touches upon the northeast corner. The third branch rises in Roxbury, runs through Braintree and the corner of Randolph into this town, and after running about four miles within the town, joins White River. Near its mouth

BILLYMEAD.—BLACK CREEK AND RIVER.—BLOOMFIELD.—BOLTON.—BOMBAZINE LAKE.

are some very fine mill privileges. Locust creek falls into White river, nearly on the line between this town and Barnard. There are two villages, called the *East* and *West* village. The *west village* is the largest and is situated at the mouth of the third branch. It is a place of considerable business, having several stores, taverns, factories and mills, 35 dwelling houses, and about 250 inhabitants. The *east village* is situated in the northeast corner of the township on the second branch. It contains two stores, a large woollen factory, machine shop, &c.—*Statistics of 1840.*—Horses, 435; cattle, 1,598; sheep, 8,930; swine, 1,149; wheat, bu. 2,646; barley, 158; rye, 1,511; Oats, 12,142; buck wheat, 3,277; Indian corn, 7,184; potatoes, 50,286; hay, tons, 4,913; sugar, lbs. 28,613; wool, 24,335. Population, 1886. D. C. & O. H. P. M.

BILLYMEAD.—Name altered to Sutton, October 19, 1812. See *Sutton*.

BLACK CREEK.—A considerable branch of Missisco river in Franklin county. See *Fairfield*.

BLACK RIVER.—There are two rivers of this name in Vermont, one in Windsor county, the other in Orleans county. *Black River in Windsor county* rises in Plymouth and runs south 12 miles into Ludlow; thence east 11 miles through the centre of Cavendish into Weathersfield, and thence southeast 12 miles further, and joins Connecticut river in the lower part of Springfield. This river is remarkable for the number of natural ponds through which it passes. It affords a great number of good mill privileges, and waters about 160 square miles. Length 35 miles. *Black river in Orleans county* is formed in Craftsbury by the united waters of Elligo and Hosmer's ponds and Trout branch, and taking a northeasterly course through Albany, Irasburgh, and Orleans, falls into the South bay of lake Memphremagog, in Newport. Its length is 30 miles, and it waters about 150 square miles.

BLOOMFIELD, a post town in the northeastern part of Essex county, is in lat. 44° 48' and long. 5° 18', and is bounded northeasterly by Lemington, southeasterly by Connecticut river, which separates it from Columbia, N. H., southwesterly by Brunswick, and northwesterly by Lewis. It lies 60 miles northeast from Montpelier, and 100 from Windsor; and was chartered, June 29, 1762, by the name of Minehead, and contains 23,040 acres. The settlement of this township was commenced before the year 1800, but the progress of the settlement has been slow. The western and south parts are watered by Nulhegan river. The northeastern parts

are watered by two or three small streams, which fall into the Connecticut. *Statistics of 1840.* Horses, 44; cattle, 211; sheep 377; swine, 109; wheat, bu. 315; barley, 76; oats 1,163; b'k wheat 1,083; rye, 22; Ind. corn, 242; potatoes, 6,640; hay, tons, 450; sugar, lbs. 7,060 wool, 642. Population, 179.

BOLTON, a post town in the eastern part of Chittenden county, in lat. 44° 25' and long. 4° 9'. It is bounded north by Mansfield, east by Waterbury and a part of Duxbury, south by Huntington, and west by Richmond and Jericho. It was chartered June 7, 1763, and originally contained 36 square miles. On the 27th of Oct. 1794, the northeast part of Huntington was annexed to it. The first settlers were Noah Dewey, Peter Dilse, James Moore, Thomas Palmer, Robert Stinson, and John and Robert Kenedy. The township was first regularly surveyed in 1800 by John Johnson, Esq. It lies midway between Montpelier and Burlington, its post office being 18 miles from each. The town is very mountainous and broken, and but a small part of it capable of being settled. Winooski river runs through the town from east to west, and along the banks of this stream nearly all the inhabitants reside. The river receives several branches in this town, both from the north and south. The township lies on the western range of the Green Mountains, and the Winooski turnpike passes through it along the north bank of Winooski river. *Statistics of 1840.*—Horses, 88; cattle, 544; sheep, 2,228; swine, 78; wheat, bu. 961; oats, 3,857; rye, 21; b'k wheat, 858; corn, 2,174; potatoes, 13,400; hay, tons, 1,116; sugar, lbs. 13,215; wool, 6,081. Population, 470.

BOMBAZINE LAKE. See *Castleton*.

BRADFORD, a post town in the eastern part of Orange county, in lat. 44° and long. 4° 46', bounded north by Newbury, east by Connecticut river, which separates it from Piermont, N. H., south by Fairlee and West Fairlee, and west by Corinth. Three thousand acres of this town, lying on Connecticut river, were granted by New York to Sir Harry Moore, and by him conveyed to 30 settlers. The rest of the land was taken up by pitches. The town was first called Moretown; but was altered to Bradford, by an act of the legislature passed Oct. 23, 1788. The settlement of this town was commenced by John Hosmer in 1765, near the mouth of Wait's river. He was joined the next year by Sam'l Sleeper and Benoni Wright, and in 1771 the number of families in town amounted to ten. The first grist mill was erected by John Peters in 1772 at the falls

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near the mouth of Wait's river, and the first saw mill by Benjamin Baldwin in 1774. The first town meeting on record was on the 4th of May, 1773, and Stevens McConnel was then chosen town clerk. This town, not having been regularly chartered, the Legislature, January 22, 1791, appointed Israel Smith, Alexander Harvey and James Whitelaw, a committee to deed the land to the settlers.* The first meeting house in town was built in 1791, by the Baptists under Elder Rice. His church embraced members from several towns on both sides Connecticut river. The second meeting house was built by the Congregationalists in 1793, who settled the Rev. Gardner Kellogg, Sept. 2, 1795. He was dismissed April 6, 1809, and in 1815 the Rev. Silas McKeen was settled over this church and continued several years. The two first meeting houses have both been taken down. There are at present four houses for worship, one belonging to the Congregationalists, one to the Christains, one to the Methodists, and a union house. The lands for the first settled minister were divided, 200 acres to the Congregationalists, and 100 acres to the Baptists. Wait's river, the principal stream in town, enters it from the west in two branches, and passing through, in an easterly direction, empties into Connecticut river, affording a number of valuable mill privileges. Hall's brook and Roaring brook, are considerable streams, which enter the town from Newbury and pass through the corner of it into the Connecticut. Smaller streams are numerous, and several medicinal springs have been discovered, but are of little note. The surface of the town is somewhat broken. A handsome and fertile strip of intervale skirts Connecticut river, and there is much good land in other parts. There is no waste land with the exception of 30 or 40 acres on Wright's mountain. In the northwest part of the town is situated Wright's Mountain, sometimes, erroneously called Virgin Mountain. In this mountain is a cavern called the *Devil's Den*, which has several

* We have received from John McDuffee, Esq. of Bradford a very minute and full account of the conflicting grants and claims to the lands in Bradford and the neighboring towns, and of the surveys which were undertaken by the various claimants. The interesting facts which are embraced in his communication are highly worthy of preservation, and we regret that we have not room to insert the article entire. It appears that the lands in this vicinity were granted both by New Hampshire and New York, and that the townships were surveyed and claimed under charters from both provinces, which produced much trouble and vexatious litigation. A portion of the substance of Mr. McDuffee's communication will be found in our account of Connecticut river, Corinth, &c.

BRADLEYVALE.

apartments, and is thought to have been the abode of human beings. In the east part of the town is a considerable precipice called Rowell's Ledge. The timber is principally pine, sugar maple, oak, beech, and hemlock. Bradford academy was incorporated and the building erected in 1820. It has a male and female department, with permanent teachers. The school is in a flourishing condition. The yearly attendance is about 200. The present head teachers are Mr. M. P. Case, a graduate of the University of Vermont, and Miss Martha A. Rogers, formerly of Boston, Mass. The school derives a portion of its support from the county grammar school lands, but depends chiefly upon the charge for tuition. At the principal falls in Wait's river, about half a mile from its junction with the Connecticut, is a small but flourishing village. On the falls, which afford some of the best mill privileges in the state, are a grist and saw mill, furnace for casting ploughs, stoves, &c. two whetstone factories, two machine shops, and an extensive paper mill. In addition to the above, the village contains, besides stores, mechanics shops, &c., a meeting house, an academy, 77 dwelling houses, and 101 families. On Wait's river, about two miles above the village, is a saw mill and woollen factory. The first artificial globes ever manufactured in the United States, were made here about the year 1812, by Mr. James Wilson. After a labor of several years, Mr. W. & Sons, succeeded in bringing their globes to a high degree of perfection, and established a manufactory of them at Albany, N. Y., on an extensive scale. *Statistics of 1840.* Horses, 389; cattle, 2,100; sheep, 9,388; swine, 1,350; wheat, bu. 3,464; barley, 76; oats, 21,832; rye, 1,118; buck wheat, 1,007; Indian corn, 8,455; potatoes, 48,178; hay, tons, 3,932; sugar, lbs. 9,387; wool, 16,424. Population, 1655.

BRADLEYVALE, an unorganized township in the eastern part of Caledonia county, having Victory on the northeast, Concord on the southeast and Kirby on the west. It was chartered to Thomas Pearsall, Jan. 27, 1791, and contains 3,936 acres, and was incorporated with all the rights and privileges of a town, excepting that of representation, Oct. 29, 1803. It is watered by Moose river, which passes through it near the centre, from northeast to southwest, and joins the Passumpsic at St. Johnsbury. *Statistics of 1840.*—Horses, 10; cattle, 41; sheep, 88; swine, 19; wheat, bu. 31; barley, 60; oats, 300; rye, 10; buckwheat, 78; Indian corn, 63; potatoes, 1,155; hay, tons, 83; sugar, lbs. 1,700; wool, 197. Population, 50.

BRAINTREE.

BRAINTREE, a township in the southwest corner of Orange county, in lat. 43° 58' and long. 4° 19', bounded northerly by Roxbury and Brookfield, easterly by Randolph, southerly by Bethel, and westerly by Granville. It is 21 miles southwesterly from Montpelier, and 38 northwest from Windsor. This township was granted November 2, 1780, and was chartered to Jacob Spear, Levi Davis and others, August 1, 1781. It originally contained 36 square miles. The settlement of the town was commenced about the year 1783, by Silas Flint, Samuel Bass, Jacob and Samuel Spear and others, emigrants from Braintree and Sutton, Mass. S. Flint's wife was the first woman who came into the town and received in consequence a present of 100 acres of land from the proprietors. Hiram, son of Samuel Bass, was the first child born in town. The first proprietors' meeting held within the town was at the house of Jacob Spear, September 19, 1786. The town was organized March 7, 1788, and Elijah French was first town clerk. It was first represented by Isaac Nichols in 1791. The religious denominations are Congregationalists, Baptists and Christians. The Congregational church was organized Dec. 25, 1794, and at first consisted of 8 members. The Rev. Aaron Cleveland was settled over it in March, 1801, and dismissed April 22, 1807. Sept. 22, 1807, the Rev. Ammi Nichols, the present pastor, was settled over it. In 1801, they erected a commodious meeting house upon what is called Quaker hill. Elder Elijah Huntington was settled over the Baptist church in June, 1800. They have a meeting house at the branch, erected about the year 1813. There is a society of Christians, who have a meeting house erected about the year 1816, in the east part of the town, and also some Methodists. Mrs. Dorcas Nichols died in this town in 1841, aged 105. The town has in general been very healthy. It is watered by the third branch of White river, and Ayers' and Mill brook, its tributaries. They are all sufficient for mills. Ayers' brook rises in Roxbury and Brookfield, waters the northeast part of the town, and after receiving Mill brook from the west, unites with the third branch of White river, just below the west village in Randolph. Between Ayers' brook and the third branch, is a large swell of land, and when Mr. Ebenezer Waters was surveying the township he said to those with him, "We will sit down here and dine with our hats on and call it *Quaker Hill*," and it has ever since been known by that name. Between the third branch and the head of White river,

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is a considerable mountain, which renders that part of the township incapable of settlement. According to tradition, Ayers' brook derives its name from a person by the name of Ayers, who, having run away from New England, became a guide to the French and Indians in their expeditions against the English, but who was taken and executed near this stream, about the year 1755. *Statistics of 1840.*—Horses, 418; cattle, 1,670; sheep, 6,180; swine, 1,120; wheat, bu. 3,680; barley, 465; oats, 1,218; rye, 1,080; b'k wheat, 1,345; Ind. corn, 4,880; potatoes, 42,010; hay, tons, 3,581; sugar, lbs. 18,800; wool, 12,860. Population, 1332.

BRANDON, a post town in the north part of Rutland county, 40 miles northwest from Windsor, 40 southwest from Montpelier, and 65 north from Bennington, in lat. 43° 48' and long. 3° 59'. It is bounded north by Leicester, east by Goshen and Chittenden, south by Pittsford, and west by Sudbury and a small part of Whiting. It was chartered by the name of Neshobe, October 20, 1762, and contains 22,756 acres. The name was altered to Brandon, October 20, 1784. The settlement of the town was commenced in the year 1775 by John Whelan, Noah Strong, David June, Jedediah Winslow, Amos Cutler, and others. Mr. Cutler was, however, the only person who remained in town during the following winter. He lived the whole winter here entirely alone, without being visited by a human being. In 1777, the town was visited by a party of Indians, who killed two men, George and Aaron Robins, made prisoners of most of the other inhabitants, and set fire to their dwellings and to a saw mill which they had erected. Joseph Barker, his wife, and a child eighteen months old, were among the prisoners. Mrs. Barker, not being in a condition to traverse the wilderness, was set at liberty with her child. The next night, with no other shelter than the trees of the forest and the canopy of heaven, and with no other company than the infant above named, she had another child. She was found the following day and removed with her children to Pittsford. Mr. Barker was carried to Middlebury, where, feigning himself sick, he succeeded in the night in making his escape, and arrived safely at Pittsford. The town was organized about the year 1784, and Gideon Horton was first town clerk. The religious denominations are Baptists, Congregationalists, Methodists and Episcopalians. The first settled minister was the Rev. Isaac Webb. He was settled by the Baptist church and socitey about the year

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1788. The Baptist society, which is numerous, erected a commodious and elegant church in 1832, a figure of which may be seen in part second, page 185. It has been for some time under the pastoral care of the Rev. C. A. Thomas. The Congregational church was organized September 23, 1785, but had no settled minister till 1792, when they settled the Rev. Enos Bliss. His successors have been the Rev. Ebenezer Hebard, from January 3, 1800, to September 7, 1820; the Rev. Beriah Green, from April 16, 1823, to May 11, 1829; the Rev. Ira Ingraham, from September 1, 1830, to Feb. 17, 1836; and the Rev. Harvey Curtis, from February 17, 1836, to December 15, 1840. The Episcopal church was organized in 1839, under the name of *St. Thomas' Church*. Their minister is the Rev. Josiah Perry. They are erecting a neat gothic church the present season. The surface of this township is generally level. The Green Mountains lie along the east line, and present some lofty summits. The principal streams are Otter creek, which runs through the town from south to north, and Mill river, which rises among the mountains in Goshen and enters this town from the east. At the foot of the mountains, Mill river receives the waters of a small pond, called Spring pond, and becomes a considerable mill stream. In this stream are several falls, which afford excellent sites for mills and other machinery. It runs about ten miles and falls into Otter creek about a mile from the village. The soil of the town is various, but generally a light loam, easily tilled and very productive. The eastern part is an extensive pine plain and is considered poor land; yet, by proper attention, it is converted into good farms. The western part is a mixture of clay and loam. The alluvial flats, or intervale, along Otter creek in this town, are extensive and beautiful, and are not surpassed in fertility by any in the vicinity. The town produces every variety of timber common to the country. Pine, oak, cherry, sugar and red maple, ash and cedar are found in abundance. A bed of bog iron ore was discovered in this town about 1810, which is inexhaustible, and which has been extensively wrought for some years past into bar and cast iron. From seven to nine tons of this ore can be melted in a quarter furnace, in 24 hours, yielding 33 per cent. of soft grey iron, which is not liable to crack from the effects of heat, and, consequently, makes the best of stoves. Small cannon have been made from it, which are bored with facility and answer a good purpose. The bar iron, which is made

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from the ore, is of the best quality. The ore is found by digging five or six feet, and is covered by strata of sand and ocher. The bed has been penetrated about 100 feet, but its depth is not known. Manganese is found here in abundance and of the best quality. Nearly 200 tons are annually sent to market, much of which is exported to Europe. Marble is extensively quarried and manufactured, and a quarry has recently been opened which is thought to be equal to the finest Italian marble. About $1\frac{1}{2}$ mile east of the village, are two caverns in limestone ledges, and about half a mile apart. The descent into the largest is about 18 feet perpendicular, into a room 16 or 18 feet square. From this room is a passage, barely sufficient to admit a middling sized person to pass along in a creeping posture, into another room still larger, which has not been much explored. *Brandon village* is among the most flourishing in the state. It is situated in the centre of the town, and is divided nearly equally by Mill river. It is 16 miles from Middlebury, 16 from Rochester, 16 from Rutland, and 16 from lake Champlain. It contains 130 dwelling houses, 3 brick meeting houses, a seminary, 100 feet by 30, under the patronage of the Baptist denomination, 2 two-story brick school houses, and a variety of iron works, mills, and other buildings, and about 940 inhabitants. There are in town, 13 school districts and 13 school houses, 2 blast and 2 cupola furnaces, 1 flouring mill and 10 saw mills, a last factory, a lead pipe factory, &c.—*Statistics of 1840.*—Horses, 331; cattle, 1,395; sheep, 14,091; swine, 546; wheat, bu. 1,498; barley, 20; Oats, 7,174; rye, 2,803; buck wheat, 959; In. corn, 10,222; potatoes, 26,052; hay, tons, 5,172; sugar, lbs. 13,586; wool, 32,758. Pop. 2,194.

BRATTLEBOROUGH, a post town in the southeastern part of Windham county, is in lat. $42^{\circ} 52'$ and long. $4^{\circ} 25'$. It is the principal town in the county and is bounded north by Dummerston, east by Connecticut river, which separates it from Chesterfield, N. H. south by Vernon and Guilford, and west by Marlborough. The town was chartered, December 26, 1753, and contains about 34 square miles. It is about 100 miles south from Montpelier, 30 east from Bennington, 75 west from Boston, 60 from Albany and 390 from Washington. This town derives its name from Colonel Brattle, of Massachusetts, one of the principal proprietors. Fort Dummer, the first civilized establishment within the present limits of Vermont, was built in 1724, in the southeast corner of the town, on what is now called "*Dummer*

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Meadows." Nathan Willard, David Sargeant, David Sargeant, Jr. John and Thos. Sargeant, John Alexander, Fairbank Moore and son, Samuel Wells and John Arms were among the first settlers, and were all from Massachusetts except John and Thomas Sargeant, and John Alexander, who were born at Fort Dummer. John Sargeant is believed to have been the first white person born within the present limits of Vermont. His father and brother David were ambushed by the Indians; the former killed and scalped, and the other carried into captivity, where he adopted the Indian habits and manners, but afterwards returned to his friends. Fairbank Moore and his son were killed by Indians at West river meadows, two miles north of Fort Dummer, and the wife and daughter of the latter, carried into captivity. In 1771, Stephen Greenleaf, from Boston, having purchased what was called the *Governor's Farm*, situated where the east village now is, opened a store here, which was supposed to be the first store within the limits of Vermont. The time the town was organized is not ascertained. It appears, however, that Doct. Henry Wells was the first town clerk. Colonel Samuel Wells was the first representative for the county of Cumberland, under the then province of New York. As the transactions, during the celebrated controversy with New York, were somewhat similar in several of the old towns in this vicinity, the reader is referred to the account of Guilford, Bennington, &c. The Congregationalists are the most numerous denomination of Christians. Their first minister was the Rev. Abner Reeve. He was settled by covenant in the year 1770, and preached about 26 years, when, by his own consent, he was succeeded, in 1794, by the Rev. William Wells, from Great Britain, whose salary was yearly granted by the town. He preached about 20 years and was succeeded, in 1814, by the Rev. Caleb Burge, who continued about 6 years and was dismissed by mutual consent. He was succeeded January 3, 1821, by the Rev. Jedediah L. Stark, who was dismissed April 24, 1839, and was succeeded by the Rev. Corbin Kidder, the present minister, who was installed October 15, 1839. The first meeting house was built by the town about 1772. It was small and a larger one was built in the west village in 1785. A new Congregational parish being formed, in 1815 they erected a new meeting house in the east village, which was dedicated August 22, 1816, and settled the Rev. Jonathan McGee, January 13, 1819. He was dismissed September 10, 1834, and was succeeded by the Rev.

Charles Walker, the present incumbent, who was installed January 1, 1835. A society of Unitarians erected a house of worship in the east village in 1831, which was dedicated February 22, 1832, and June 14, 1832, they settled the Rev. Addison Brown, who is their present minister. There is a Methodist society in each village, which are supplied by itinerant preachers; that in the east village erected a chapel in 1837. There is also a Baptist society in the east village, which are about erecting a house of worship. An Episcopal parish was organized here in 1836, by the Rev. David S. Devens, under the name of *St. Peter's Church*. It consists of only a few families and has had only occasional ministerial services. An academy was incorporated in the west village in 1801. The building was originally 56 by 40 feet and two stories high, to which additions have since been made. A high school was located in the east village in 1831, and is in successful operation under the charge of Mr. David M. Kimball. Among the men of this town who are distinguished in the annals of the state, may be mentioned the Hon. Samuel Knight, Samuel Wells, Samuel Gale, Samuel Stearns, L. L. D., Dr. Henry Wells, Micah Townsend, Hon. John Noyes, James Elliot, Royal Tyler, Rev. Wm. Wells, D. D., John Blake, John Steward, Lemuel Whitney, Jonathan Hunt, John Holbrook, Joseph Clark, Samuel Elliot and Samuel Clark. The surface of the town is considerably broken. A little west of the centre are two elevations called *Great* and *Little* Round mountain. They are both accessible, and most of the land capable of cultivation. The soil is similar to that generally found along the Connecticut, consisting of intervale, sand, loam and gravel, with such timber as is naturally adapted to them. The principal streams are West river and Whetstone brook. The former runs but a short distance in town, entering it from Dummerston and falling into Connecticut river near the northeast corner. Whetstone brook rises in Marlborough and runs through Brattleborough very near the centre. This affords many excellent water privileges, which are already occupied by a great variety of mills and other machinery. Connecticut river forms the eastern boundary for about six miles. It runs in several places with a strong current, denominated "The swift water" by the boatmen. The river is crossed at the lower part of the east village, by a handsome bridge, built in 1804, and connecting this town with Hinsdale, New Hampshire. A few rods above the bridge is the general landing place for

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merchandise, which is brought into town by boats. There are few minerals worthy of notice. Actynolite is found here in steatite. It is in very perfect capillary crystals which are grouped together in different forms and sometimes radicated. Argillaceous slate is very abundant, and is quarried to considerable extent. Mica is found of rose red color with schorl in quartz, and abundance of schorl in beautiful crystals, and also the red oxyde of titanium. There are two considerable villages, one standing at the mouth of Whetstone brook, called the *East Village*, and the other near the centre of the town, called the *West Village*. The east village is one of the most active business places in the state. Besides the public buildings, the numerous manufacturing establishments, stores and mechanic shops, it contains a post office, bank, two printing offices, 7 water power printing presses,* and the asylum for the insane.† Five daily mails arrive in this village and two others less frequently. There is also a post office in the west village, but it is comparatively a place of little business. *Statistics of 1840.*—Horses, 375; cattle, 2,120; sheep, 2,350; swine, 1,123; wheat, bu. 1,235; barley, 738; oats, 9,920; rye, 2,687; b'k wheat, 412; corn, 6,490; potatoes, 27,480; hay, tons, 3,358; sugar, lbs. 12,250; wool, 4,058. Population, 2623. s. g.

BRIDGEWATER, a post town in the western part of Windsor county, situated in lat. 43° 37' and long. 4° 22', and bounded north by Barnard, east by Woodstock, south by Plymouth and west by Sherburne. The length of the western boundary is, by the charter, eight miles, that of the eastern seven miles and a half, and of the northern and southern six miles each, giving an area of 46½ miles. Barnard, however, claims and is now in possession of a strip of land about half a mile in breadth, extending across the north end of the town, and this too under a charter derived from the same source, and dated seven days later than that of Bridgewater. Bridgewater is 45 miles south from Montpelier, 17 northwest from Windsor, and 60 northeast from Bennington. Its charter is dated July 10, 1761. Dea. Asa Jones surveyed a lot of land in Bridgewater, in September, 1779, and the next winter, removed his family into this town from Woodstock, a distance of three miles, on handsleds. This was the first family

in town. Mr. Amos Mendall came in, the spring following, May, 1780, and was married to a daughter of Dea. Jones. This was the first couple married, and was the second family in town. Their daughter, Lucy, was the first child born. In 1783, Messrs. Isaiah Shaw and Cephas Sheldon moved their families into the north part of the town, they having commenced improvements the year before. Capt. James Fletcher came in with his family about the same time. In 1784, settlements were commenced along the river in the south part of the town, by the Messrs. Southgates, Hawkins and Topliff, and from this time the settlement proceeded rapidly for a number of years. The first saw mill was erected in the north part of the town, in 1784, by Mr. George Boyce. The Messrs. Hawkins built one which went into operation in 1785, and the Messrs. Southgates another which went into operation soon after. The latter gentlemen also built in 1786, the first grist mill. Mr. Joseph Boyce had the first framed house. The first town meeting was held and the town organized, March 30, 1785, at which time John Hawkins was chosen town clerk, Richard Southgate, Isaiah Shaw and James Fletcher, selectmen, and Joseph Hawkins constable. The town was first represented, in the General Assembly, by John Hawkins, in 1784.—The religious denominations, in Bridgewater, are Congregationalists, Baptists, Methodists, Christians and Universalists. The Congregational church was the first collected in town. It was organized January 1, 1793, and then consisted of 20 members. Mr. John Ransom was ordained over it, March 4, 1795, and continued to preach here the greatest part of the time till 1802. Since that period they have not had regular preaching. They have a meeting house in the south part of the town, erected May 1, 1828. There is another meeting house situated in the village in the south part of the town, which was raised July 4, 1829, and belongs principally to the Universalists. The other denominations have no houses for worship. The Baptist church was organized June 6, 1806, and then consisted of 11 members. It was for more than 30 years under the pastoral care of Elder Nehemiah Woodward. This town has, generally, been very healthy. The dysentery has, sometimes, prevailed and carried off a number of children. In 1813, the lung fever prevailed to an alarming degree. It swept off great numbers of the most respectable and useful citizens. Nineteen persons died in Bridgewater of this disease in the month of March, a great portion of whom

* In 1836, the business done at Holbrook & Fessenden's paper mill, printing office and bindery, amounted to about \$500,000. Since that period the establishment has been transferred to the Typographical Company, and the amount of business not known.

† For an account of the Asylum, see part second, page 219.

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were heads of families. There have been no remarkable instances of longevity. Several have lived to the age of 90 years. In August, 1822, Mr. Aaron Lamb, while sinking a well about 80 rods north of Otta Quechee river, dug up a living frog, at the depth 26 feet below the surface of the ground. It was in a state of torpor when taken up, but revived after being exposed a short time to the atmosphere. This town is watered by Otta Quechee river, which runs through the south part, and by several considerable branches. These streams afford numerous mill privileges. The surface of this town is uneven and some parts rough and stoney. Along the river, are tracts of valuable intervalle, and there are many good farms in other parts. The summits of the hills are, in general, covered with spruce and hemlock; the timber, on other parts, is mostly maple, beech, and birch. The rocks are mica, and talco-argillaceous slate, gneiss, limestone, quartz, &c. There is an inexhaustible quarry of steatite, situated nearly in the centre of the town. It has been manufactured to some extent, and makes excellent jambs, hearths, &c. In the vicinity of the steatite, are large quantities of beautiful green talc. Iron ore is found in several places. Garnets in perfect dodechedral crystals are common, and several handsome specimens of rock crystal, crystals of hornblend and schorl, have been found. There is a small village, on the river, near the southeast corner of the town in which are a meeting house, several mills, factories, stores, and mechanic's shops. *Statistics of 1840.*—Horses, 318; cattle, 1,943; sheep, 9,309; swine, 752; wheat, bush. 3,165; barley, 101; oats 12,628; rye, 480; buck wheat, 2,119; Ind. corn, 5,815; potatoes, 47,215; hay, tons, 4,541; sugar, lbs. 34,725; wool, 21,426. Pop. 1363.

BRIDPORT, a post town, in the west part of Addison county, in lat. 43° 58', and long. 3° 44', bounded north by Addison, east by Weybridge and Cornwall, south by Shoreham, and west by Lake Champlain, which separates it from Crown Point, N. Y. It is eight miles west of Middlebury, 35 south of Burlington, and 41 southwest of Montpelier. It was chartered, October 10, 1761, to 64 proprietors, mostly of Massachusetts, of whom Ephraim Doolittle and Benjamin Raymond were active in the early settlement, and it contains about 42 square miles. The first attempt to settle the town, was made in 1768, but was abandoned at that time on account of the urgency of the New-York claims. The first permanent settler was Philip Stone, who was also the first

colonel in the county. In 1768, being 21 years of age, he came from Groton, Mass., to this place, purchased a lot of land, and commenced clearing it. Two families, by the name of Richardson and Smith, settled under N. Y. titles about the same time, and three others, by the name of Towner, Chipman and Plumer, under N. H. titles. The settlers mostly retired before Burgoyne and his army in 1776 and '7. During the controversy with New-York, no skirmishing happened in this town between the New-York and New Hampshire claimants, but the inhabitants, frequently, aided their neighbors in the adjoining towns, in inflicting the customary punishment of whipping upon the Yorkers, who refused to retire after the usual warning. In 1772, Ethan Allen, having been declared an outlaw by the New-York government, and a bounty offered for his apprehension, called in company with Eli Roberts, of Vergennes, at the house of Mr. Richards of this town. In the evening, six soldiers from Crown Point garrison, all armed, as were Allen and Roberts, stopped for the night. Mrs. Richards overheard them making their arrangement to take Allen and get the bounty. All was quiet till bed time, when Mrs. Richards, on lighting Allen and Roberts into another room, raised a window, at which they silently escaped. When the soldiers discovered that they were gone, they reprimanded Mrs. Richards severely for favouring their escape. But she replied that "it was for the safety of her house, for had they been taken here, the Hampshire men would have torn it down over their heads." November 25, 1773, Samuel Smith, from N. J., moved his family into town, having been three years in the vicinity, and his was the second family which remained permanently here. Philip Stone was married the same day to a Miss Ward, of Addison, whose family had recently moved into that town from Dover, N. Y. Mr. Victory came with his family, the following winter. He died on an island in lake George of an inflammatory fever, having no person with him but a son 14 years old, with a skiff. The lad tarried by his dead father till some people came so near that he hailed them, who came on shore, buried his father, and took him off. The early settlers suffered extremely from fever and ague, and the long, or lake fever. They had no roads for many years, except the lake and the road from Charlestown to Crown Point, which passed through this town. They derived much aid from the garrison at Crown Point, in occasional supplies of provisions and other

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necessaries, and were encouraged by the cheapness of the land, it being only about \$20, a right of 360 acres, so that the settlement continued slowly to advance till the commencement of the revolution in 1775. And then the hope of its speedy close induced most of the settlers to remain on their farms, for two or three of the first years, except on occasional alarms, when they retired into the county of Rutland or Bennington. A few incidents may serve to give the reader an idea of these times, and of the state of the families here and in the other towns in this part of the state, during the war. These parts were frequently subject to the depredations of the merciless Indians, who, generally, fell upon the settlements before they had any warning of their approach. As they seldom molested women and children, it was customary for the men to flee into the woods till the Indians had performed their work of plunder. At one time a party of them entered the house of Mr. Stone, giving him but just time to escape, and after stripping it of every thing of value to them, the principal Sanhoop put on the finest shirt it afforded, and swaggering away to the hogsty, selected the best hog, and officiated as chief butcher, flourishing his fine bloody sleeves, while his comrades, hooping and dancing, carried it away to their canoes. At another time, a party of Indians, coming up the bank, were discovered by Mrs. Stone, in season to throw some things out of a back window into the weeds, put a few in her bosom, and sit down to her carding. The Indians, after taking what they could find elsewhere, came about Mrs. Stone and the children. One of them seeming to suspect that she had some valuable articles concealed about her person, attempted to pull them from her bosom, whereupon she struk him on the face with the teeth side of her card so violently that he withdrew his hand, while a tall young savage was flourishing his tomahawk over her head. Upon this an old Indian cried out, "*Good squaw, good squaw,*" and burst into a laugh of derision at his companions for being beaten. At the commencement of the revolution, in 1775, when Allen and Warner were mustering the militia to surprise the garrison at Ticonderoga, a Mr. Douglass was dispatched to this town to procure aid in men, and boats, to convey over the troops, an account of which has been given in part second, page 33. During the war there were two skirmishes in this town between small scouts, in which three or four men were killed. After the capture of Burgoyne, and three

weeks before the British evacuated Ticonderoga, a party from Otter creek, came out in the night and plundered the house of a tory, by the name of Prindle, who was a neighbor of Mr. Stone. Prindle, not owning the house, set it on fire, and, retreating on board a British armed vessel on the lake, implicated Mr. Stone in the robbery and burning. He, anticipating mischief, kept in the bushes near the bank to observe their movements, where the British discovered him and let off a volley of grape shot, which struck among the trees above him, and also fired upon his house, some of the shot entering the room where the family was. They, then, sent a boat on shore, took Mr. Stone and carried him a prisoner to Ticonderoga where he remained three weeks. Mrs. Stone expecting he would be sent to Quebec, went to him in a canoe, a distance of 12 miles, with no other company than her brother, a lad only ten years old, to carry him clothes, leaving her two children, the oldest but four years old, alone at home. She had to tarry all night before she could gain admittance. On her return she found her children safe, the oldest having understood enough of her directions to feed and take care of the younger. In 1778, the inhabitants, despairing of immediate peace, and being continually harrassed, mostly abandoned the town. Nathan and Marshal Smith, and John Ward, who was just married, however, staid. On the 4th of November, 1778, they, being together, were taken by a party of British under Major Carleton, who collected 39 prisoners, men and boys, in this vicinity, to carry to Canada. He discharged two of the prisoners, Elijah Grandy and Thomas Shinkly, with a batteau to carry the women and children to the Americans, while he detained their fathers, husbands and older sons. The parting was a scene which affected a sailor's heart, and caused him to say, "I never saw but one such scene before, and that was when our fleet sailed for America, and some leaped over board to reach their friends on shore, but were pursued and brought back." Ward swung his hat and cried to his wife and the rest, "*Never mind it, we shall soon return.*" They reached Quebec, December 6, and were kept kept in prison 16 months and 19 days. In the spring, after two dreary winters, in which several of the party died, about 40 of the prisoners, among whom were the two Smiths, Ward and Sturdisit were removed 30 leagues down the St. Lawrence river and set to work. From this place eight of the prisoners deserted, among whom were the four just named. Of these Sturdisit was

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retaken and remained a prisoner till the close of the war. The other three, after almost incredible perseverance and sufferings and hair-breadth escapes, succeeded in making their way through the wilderness to the fort at Pittsford.*

Bridport was organized March 29, 1784, and J. N. Bennet was first town clerk. It was first represented in 1786, by Nathan Manley. There are three churches and three meeting houses in town. The Congregationalist church was organized June 30, 1790, and now consists of 200 members. Their meeting house stands in the village, and was dedicated in 1813. The Rev. Increase Graves was installed over this church February 26, 1794. On the 7th of June, 1827, the Rev. James F. McEwen was settled as colleague of the Rev. Mr. Graves, then advanced in age, and December 1, 1829, both were dismissed. The Rev. Dana Lamb, the present pastor, was settled February 16, 1831. The Baptist church was organized in 1804. It now consists of about 80 members. Their meeting house is situated about a mile from the lake, and their present minister is Elder Alfred Harvey. The Methodist society was organized in 1800. The church consists of about 60 members and is supplied with circuit preaching. Their house for worship, built in 1821, is in the village. There has been a small society of Protestant Methodists here. There have been several general revivals of religion. The first in 1803, subjects about 100. The second in 1813, upwards of 100; and the third in 1821. Of the fruits of the latter about 90 united with the Congregational church and a considerable number with the other churches. There were also considerable revivals in 1831, 1836, and 1841. The dysentery prevailed here in 1802, of which 16 died. Of the epidemic in 1813, about 50 died. In 1822, 25 died here of the dysentery. The surface of this town is very level, and the soil, generally, is a brittle marl, or clay. The hills are a loam and red slaty sandstone. A range of shelly blue slate extends through the town, lying, generally, a little below the surface. The prevailing timber, in the west part of the town, is oak, with white and some Norway pine, along the lake shore. In the eastern part it is, principally, maple and beech. The raising of sheep has been the chief occupation of the people for several years past, which accounts for the decrease of population. This town is poorly watered, there being no durable mill streams, and the springs and ground, gen-

erally, being impregnated with epsom salts, or sulphate of magnesia. For family use, rain water is, generally, employed. It is preserved in large reservoirs, or cisterns set in the ground. Of the brackish water, in this town, cattle are extremely fond, and it serves, in a manner, as a substitute for salt. Some of the springs are so strongly impregnated, that, in time of low water, a pailful will yield a pound of the salts. The discovery of these salts as an ingredient in the waters here, was made by the Rev. Sylvanus Chapin, and they were manufactured in considerable quantities, as early as 1790, but the cheapness of the imported salts has prevented much being done at the business for some years past. There is a small but neat and pleasantly located village, consisting of about 25 dwelling houses. The prospect, from the "common," of the mountain and lake scenery is very fine. This town has its medicinal spring impregnated with sulphurated hydrogen, similar to those which are so common in the eastern part of the state. There are several landing places of goods on the lake shore, and in the town six stores, one tavern, one grist and four saw mills, and 12 school districts. *Statistics of 1840.*—Horses, 452; cattle, 4,672; sheep, 27,228; swine, 776; wheat, bu. 2,920; barley, 24; oats, 10,760; rye, 487; buck wheat, 629; Indian corn, 2,988; potatoes, 15,820; hay, tons, 11,475; sugar, lbs. 484; wool, 69,164. Population, 1480.

BRIGHTON, a post town in the western part of Essex county, in lat. 44° 45', and long. 5° 6' and bounded northerly by Wenlock, easterly by Ferdinand, southerly by Newark and a part of Westmore and Easthaven, and westerly by Charleston. It was chartered August 13, 1781, to Col. Joseph Nightingale and associates of Providence, R. I. and contains 23,970 acres. It was named Random by the Hon. Joseph Brown, it being a random purchase from an agent sent to Providence, from Vermont. The name was altered to Brighton November 3, 1832. The settlement was commenced in 1823 by Enos Bishop; and John Stevens moved his family into the town in 1825. The settlement is mostly in the westerly part of the town. The town was organized in March 1832. William Malada was first town clerk, and Timothy Cory first representative. The township is watered chiefly by Ferren's river and other head branches of Clyde river, but some of the head branches of the Passumpsic and Nulhegan rivers originate here. Pitkin's pond and Knowlton lake discharge their waters through Clyde river. This is con-

* A full and interesting account of these transactions was given in the first edition of our Gazetteer, but are omitted here for the want of room.

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BROAD BROOK.—BROMLEY.

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sidered a very good township of land, and contains much excellent white pine timber with several fine mill sites. Two saw mills and one shingle mill have been erected, and, at Aldrich's mills on Clyde river, are the rudiments of a village.

Statistics of 1840.—Horses, 27; cattle, 118; sheep, 242; swine, 71; wheat, bu. 358; barley, 63; oats, 1,092; rye, 43; buckwheat, 277; In. corn, 54; potatoes, 4,700; hay, tons, 246; sugar, lbs. 6,050; wool, 348. Population, 157.

BRISTOL, a post town in the northeastern part of Addison county, in lat. 44° 7' and long. 3° 59', is bounded north by Monkton and Starksboro' east by Lincoln and Starksboro' south by Middlebury and Avery's Gore and west by New-Haven. It is 25 miles southwest from Montpelier, and the same distance southeast from Burlington. It was chartered to Samuel Averill and his associates, by the name of Pocock, June 26, 1762, and contains about 26,000 acres. The name was altered to Bristol, October 21, 1789. The settlement of this town was commenced immediately after the revolutionary war, by Samuel Stewart and Eden Johnson. These were soon joined by Benjamin Griswold, Cyprian, Calvin and Jonathan Eastman, Justus Allen and others. The town was organized March 2, 1789; and Samuel Ranny was first town clerk, and Robert Holly first representative. There are three religious societies, the Baptist, the Methodist and the Congregational. Each of these societies has a good meeting house, that of the Baptist erected in 1819, of the Methodist in 1840, and of the Congregationalist in 1841. The first ordained minister was the Rev. Amos Stearns. The present ministers are, the Rev. Solomon Gale, Baptist, the Rev. B. O. Meeker, Methodist, and the Rev. Calvin Butler. The Congregational church was organized July 8, 1805. The epidemic of 1812, prevailed here, but was not very mortal. About one third of this town lies entirely west of the Green Mountains, and is very level, rich and productive. The remainder of the town is broken and a considerable part incapable of cultivation. A considerable mountain extends through the town from north to south. That part of it north of the Great Notch, through which New-Haven river passes, is called the Hog Back, and that on the south is called South mountain. A part of the latter was formerly much infested with rattle snakes. New-Haven river, enters this town from the southeast, and before it reaches the centre of the town, receives Baldwin creek from the north. After passing the Notch and Bristol vil-

lage it runs some distance nearly south and then turns to the west into New-Haven. There are three natural ponds here; the largest called Bristol pond, is a mile and a half long and three fourths of a mile wide. In the west part of the town is a spring which is slightly medicinal, and is sometimes visited. There is a bed of iron ore in the part of the town next to Monkton, and there have been several forges here, but two only are now in operation, making annually about 100 tons of wrought iron. Most of the ore which is used here, is brought from Monkton and from a bed in Moriah, N. Y. west of lake Champlain. This town furnishes large quantities of sawed lumber, which are sent to market. The village is near the centre of the town, upon New-Haven river, immediately after it passes the Notch in the mountain. It is very pleasantly located and has 70 dwelling houses and about 400 inhabitants. The greater part of it is watered by an aqueduct nearly 400 rods in length, laid in water lime. The village contains 3 meeting houses, 2 school houses, 6 stores, 2 taverns and the usual variety of mechanics' shops. It is 10 miles from Vergennes and 11 from Middlebury. The town contains 9 school districts, 2 grist and 11 saw mills, 1 fulling mill and carding machine, 2 forges, &c. *Statistics of 1840.*—Horses, 213; cattle, 995; sheep, 3,973; swine, 596; wheat, bu. 1,524; oats, 7,540; rye, 1,087; buckwheat, 348; Ind. corn, 6,300; potatoes, 25,150; hay, tons, 2,252; sugar, lbs. 9,500; wool, 11,800. Population, 1,233.

BROAD BROOK, a small mill stream, which rises in the eastern part of Barnard, runs across the southeast corner of Royalton and falls into White river in Sharon.

BROMLEY. This name was altered to Peru, February 3, 1804. *See Peru.*

BROOKFIELD, a post town in the western part of Orange county, in lat. 44° 2' and long. 4° 25', is bounded north by Williamstown, east by Chelsea, south by Randolph and a part of Braintree, and west by Roxbury. It lies 16 miles south from Montpelier and 40 northwesterly from Windsor. This township was granted November 6, 1780, and chartered August 5, 1781, to Phineas Lyman and his associates, and contains 36 square miles. The first settlement of this town was begun in 1779, by Shubal Cross and family. Mrs. Cross was the first woman who came into town, and on that account was presented, by the proprietors, with 100 acres of land. Mr. Howard's family came in about the same time and Caleb Martin, John Lyman, Jonathan Pierce, John and Noah Payne, and several others came in soon

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after. The early settlers were principally from Conn. Capt. Cross built the first grist and saw mill. Timothy Cole was the first town clerk and Jonathan Pierce the first representative. The religious denominations are Congregationalists, Baptists, Freewill Baptists, Methodists and Universalists. The Congregationalist church was organized, July 11, 1787, and the Rev. Elijah Lyman ordained over it April 8, 1789, and continued pastor till his death, which took place April 12, 1828. Mr. Lyman was a native of Tolland, Conn. and graduated at Dartmouth college, in 1786. He was succeeded by the present pastor, the Rev. Daniel Wild, who is a native of West Fairlee, graduated at the University of Vt. in 1828, and was ordained over this church, July 1, 1830. This was for many years the only religious society in town, and the others are still comparatively small. There are four houses for public worship belonging to the several religious denominations, that of the Congregationalists was erected in 1806. In 1789 there were 52 families in town. The number of deaths in town from that time up to 1842, is 805. The smallest number of deaths in one year was one, the greatest 34, the average number 14. The years of most remarkable mortality, were 1795, 1801, 1807, 1808, 1811, 1813, and 1823. This township lies nearly on the height of land between White and Winooski river, and parts of it are broken; but it is mostly fit for cultivation and is very productive, particularly in grass. It is well watered with springs and brooks, but has no very good mill privileges. The principal stream is the second branch of White river, which originates in Williamstown, in conjunction with Stevens' branch of Winooski river, and runs through the eastern part of this town into Randolph. There are several considerable ponds, some of which afford streams, a considerable part of the year sufficient for mills and other machinery. Colt's pond near the north village is crossed by a floating bridge 25 rods long. Around and at the bottom of a small pond in the west part of the town is an inexhaustible quantity of marl, from which very good lime is manufactured. There are three good stage roads passing through the town leading from Montpelier to White river. There are 13 school districts, a female seminary, a town library consisting of about 600 volumes, 4 taverns, 3 stores, &c. *Statistics of 1840.*—Horses, 546; cattle, 2,406; sheep, 12,693; swine, 1,641; wheat, bu. 6,127; barley, 176; oats, 26,251; rye, 321; buckwheat, 4,095; Ind. corn, 7,042; potatoes, 70,686; hay,

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tons, 1,412; sugar, lbs. 26,486; wool, 25,757. Population, 1,789.

BROOKLINE, a small post town in the eastern part of Windham county, in lat. 43° 1', is bounded north by Athens, east by Westminster and Putney, south by Putney and Dummerston, and west by Townshend and Newfane, being in part separated from the latter by West river. It is about eight miles in length and from one and a half to two and a half miles in width. It was set off from Putney and Athens and incorporated into a township, October 30, 1794, and derives its name from *Grassy brook* which runs through the whole length of the town from north to south, and empties into West river on the southwestern boundary. Its area is about 17 square miles. The town was organized in March, 1795, and John Waters was first town clerk. It was first represented in 1823, by Benjamin Ormsbee. The first settlement was made in this township by Cyrus Whitcomb, jr., David Ayres, Samuel Skinner, and Jonah Moore about the year 1777. The first settlers had many hardships to endure, but nothing more than is common in new settlements generally. There are two religious societies, a Baptist society, close communion, and a union or open communion society, each having a good house of worship. The former was organized in 1798 and has had the following ministers; Rev. Amos Beckwith, settled in 1802 and remained but a short time, Rev. Isaac Wellmore, settled Nov. 2, 1808, continued 18 years, Rev. David Cutler, October 3, 1827, two years, Rev. Denzil M. Crome, May, 1837, one year, and Rev. John Baldwin, the present minister, settled in April, 1838. A deep valley runs through the whole length of the township from north to south, at the bottom of which runs *Grassy Brook*, which rises in Athens and falls into West river near the southwest corner of Brookline. Along the whole of the east line of the town, is a considerable elevation. West river forms for a short distance, the western boundary. During a violent freshet, some years since, a bed of kaolin, or porcelain clay was laid open in this town. The soil is better adapted to the production of grass than grain. There is a medicinal spring in the south part of the town, which is considered efficacious in cutaneous affections. The town has always been remarkably healthy. There are four school districts and school houses, one tavern, one saw mill and one grist mill, but the mill privileges are not very good. *Statistics of 1840.*—Horses, 75; cattle, 679; sheep, 1,553; swine, 201; wheat, bu.

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BROWN'S RIVER.—BRUNSWICK.—BUEL'S GORE.

BURKE.

294; barley, 6; oats, 2,904; rye, 343; buck wheat, 196; Ind. corn, 2,815; potatoes, 9,129; hay, tons, 937; sugar, lbs. 3,530; wool, 2,331. Population, 328.

BROWNINGTON, a post town in Orleans county, in lat. 44° 49' and long. 4° 51', is bounded northeasterly by Salem and Charleston, southeasterly by Westmore, southwesterly by Barton, and west by north by Orleans, and a small part of Irasburgh. It is 95 miles north from Windsor, 45 north by east from Montpelier, and 57 northeast from Burlington. It was granted February 26, 1782, and chartered, by the name of Brownington, October 2, 1790, to Timothy and Daniel Brown and their associates, and contains 19,845 acres. This was constituted a half shire town of Orleans county, when that county was incorporated. The seat of justice is now at Irasburgh. The settlement of the township was commenced about the year 1800. The Orleans county grammar school was incorporated and located here in 1822. The building was completed and the school opened in the fall of 1823, under the charge of the Rev. James Woodward. For several years past it has been under the charge of the Rev. A. L. Twilight. The religious denominations are Congregationalists and Methodists. Willoughby's river, which passes through the south part of the town is the only permanent mill stream. Small streams are numerous, and there is a small pond on the line between this town and Salem. It has one grist mill, 2 saw mills, and 2 stores. *Statistics of 1840.*—Horses, 135; cattle, 563; sheep, 1,844; swine, 304; wheat, bu. 1,549; barley, 318; oats, 4,181; buck wheat, 724; Ind. corn, 426; potatoes, 22,600; hay, tons, 1,391; sugar, lbs. 18,395; wool, 4,711. Population, 486.

Brown's River originates among the Mansfield mountains, runs westerly through the south part of Underhill, and north part of Jericho into Essex, and thence northerly through Westford, and empties into Lamoille river in Fairfax. Its length is about 20 miles and it derives its name from a family by the name of Brown, which settled upon its banks in Jericho.

BRUNSWICK, a post town in Essex county, situated in lat. 44° 43' and long. 5° 18', containing 14,617 acres, or 23 square miles. It is bounded north by Minehead, east by Connecticut river, south by Maidstone and west by Wenlock. It lies opposite to Stratford, in N. H. and fifty-five miles northeast from Montpelier. This town was chartered, October 13, 1761. The first settlement was commenced in the spring of 1780, by Joseph and Na-

thaniel Wait. John Merrill removed here the succeeding autumn. In 1791 the population was 66, and so slow has been its advancement that it is only twice that number now. Brunswick is watered by the west branch of Nulbegan river, which runs through the northwest part of the town, and unites with the north branch in Bloomfield. Wheeler's stream rises in Wenlock, and passes through this town into Connecticut river. This stream affords several valuable mill privileges. It passes through a number of natural ponds. Paul's stream, receiving its waters from Granby, Ferdinand and Maidstone lake, passes through the south part of the town, and is a considerable mill stream. There are three natural ponds, one covering 80 acres, one 60, and one 25. The latter is only 4 or 5 rods from the bank of Connecticut river, and is elevated 80 feet above that stream. Between the pond and the almost perpendicular bank of the river is a spruce ridge 15 or 20 feet higher than the pond. The pond receives a small brook, but has no visible outlet. About half way down the bank of the river issues a considerable stream which probably, in part at least, proceeds from the pond; but while the waters of the pond are sweet and good, those of the spring are strongly impregnated with sulphuretted hydrogen and other substances which render their taste and smell disagreeable, and impart to them medicinal properties. The spring is known by the name of the *mineral spring*, and the pond by that of *mineral pond*. *Statistics of 1840.*—Horses, 43; cattle, 219; sheep, 630; swine, 190; wheat, bu. 253; barley, 160; oats, 3,380; buck wheat, 575; Ind. corn, 435; potatoes, 8,200; hay, tons, 460; sugar, lbs. 3,370; wool, 1,385. Population, 130.

BUEL'S GORE, a tract of 4273 acres lying between Avery's Gore, in Chittenden county, and Starksborough. A part of it has been annexed to Huntington, the remaining part contained 15 inhabitants in 1840.

BURKE, a post town in the northeast part of Caledonia county, in lat. 44° 36' and long. 5° 2', is bounded northeast by Newark and East-Haven, southeast by Victory, south by Lyndon and Kirby, and west by Sutton. It is 40 miles northeast from Montpelier, and 37 north from Newbury. It was chartered, February 26, 1782, to Justus Rose, Uriah Seymour and others, and contains 23,040 acres. The settlement of this town was commenced about the year 1790 by Lemuel and Ira Walter, Seth Spencer and others from Connecticut and the south part of this

BURKE'S TONGUE.

BURLINGTON.

state. The town was organized Dec. 5, 1796, and Lemuel Walter was the first town clerk. It was first represented by Thomas Bartlet, in 1805. A saw and grist mill were erected here by Roman Fyler and his sons about the year 1800. The saw mill was destroyed by fire the next year, but was soon rebuilt. The religious denominations are Congregationalists, Baptists, Freewill Baptists, Methodists, and Universalists. Elder Peleg Hicks was settled for several years over the Baptist church, but since 1810 that and the other societies have depended upon itinerants, and temporary supplies. The epidemic of 1812 and '13 prevailed here, producing considerable mortality. The township is watered by Passumpsic river, which runs through it in a south-westerly direction and by several of its branches, which afford numerous mill privileges. It is separated from Victory by Burke mountain, which is about 3,500 feet high, and is seen from a great distance. The surface of the township is uneven and the timber mostly hard wood, interspersed with some evergreens. The soil is generally good. In 1817, Roman Fyler and others, established a manufactory of shaving boxes and brushes here, and for several years manufactured these articles to the amount of from \$1000 to \$2000, annually. In 1819 Mr. Fyler and sons commenced the preparation of oil stones, in this town. The stone was procured from a small island in Memphremagog lake, and was here prepared for use and then sent to market to the amount of three or four tons annually. It has been considered nearly, or quite equal to the Turkey oil stone and is generally known by the name of *Magog oil stone*. The town contains several grist and saw mills and stores.—*Statistics of 1840.* Horses, 281; cattle, 1,609; sheep, 3,965; swine, 985; wheat, bu. 2,358; barley, 767; oats, 17,408; rye, 149; buck wheat, 1,438; ind. corn, 2,891; potatoes, 49,620; hay, tons, 2,931; sugar, lbs. 42,050; wool, 7,475. Population, 997.

BURKE'S TONGUE. The southeast part of Burke bore this name; but, October 28, 1807, the Tongue was annexed to Hopkinstown, and the two incorporated into a township by the name of Kirby.

BURLINGTON, a post town and seat of justice in Chittenden county, lies in lat. 44° 27' and long. 3° 52', and is the most important town in the state. The township is bounded north by Colchester, from which it is separated by Winooski river, east by Williston, south by Shelburne, and west by lake Champlain, being 35 miles west by north from Montpelier, 30

north from Middlebury, 22 southeast from Plattsburgh, 85 from Montreal, and 440 from Washington. Its charter is dated June 7, 1763, and the township originally contained 36 square miles, measuring 10 miles in a right line along the Winooski river and 6 miles from north to south on the eastern boundary. On the 27th of October, that part of the township east of Muddy brook, was annexed to Williston, leaving the present area of the township about 26 square miles. The first that was done in this town with a view to its settlement was in 1774. During the summer of 1775, some clearings were made on the interval north of the village, and in the neighborhood of the falls, and two or three log huts erected. But the revolution commencing this year, the settlers in this and neighboring towns, either retreated to the south in the fall, or took shelter in the block house in Colchester* for the winter, and abandoned the country the succeeding spring. During the war no attempt was made to renew the settlement in these parts, but on the return of peace in 1783, many of those who had been compelled to leave the country, returned and others with them, and a permanent settlement was effected. The first man who brought his family into Burlington in the spring of 1783, was Mr. Stephen Lawrence. A number of other families came into Burlington the same season, among whom were Frederick Saxton, Simon Tubbs and John Collins, and from that time to the present the population has been constantly on the increase. The first town meeting on record, was March 19, 1787, and Samuel Lane was then chosen town clerk. The town was, however, probably organized a year or two before. There are in this town six religious societies. The Congregational church was organized February 23, 1805, and was for several years the only religious society, but no minister was settled in town before the year 1810. The Rev. Chauncey Lee officiated here for some time, about the years 1795 and 1796, and the Rev. Daniel C. Sanders, a considerable portion of the time, from 1798 to 1807. From 1807 to 1810, Dr. Samuel Williams, who was then having a second edition of his History of Vermont printed at Burlington, preached here some part of the time. In 1810, the Congregational society became divided into two, one of which embraced the doctrine of the Trinity, and the other rejected it. In April, of this year, each of these societies settled a minister. The Rev. Daniel Haskel was ordained over the Trinitarian or

* See part second, page 26.

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Calvinistic society, April 10, and the Rev. Samuel Clark over the Unitarian society, April 19, 1810. In the beginning of 1822, Mr. Haskel was dismissed from his pastoral charge to accept the presidency of the University of Vermont, and on the 23d of August of this year the Rev. Willard Preston was installed over the Calvinistic church and society. In July, 1825, he resigned his charge to succeed Mr. Haskel as president of the University, and on the 3d of May, 1826, the Rev. Reuben Smith was installed over this church and society. Mr. Smith was succeeded by the Rev. J. K. Converse, the present minister, who was ordained Aug. 9, 1832. This society erected the first meeting house in town, which was dedicated in December, 1812. This house, which was of wood, was consumed by fire June 23, 1839, but another has arisen from its ashes, which was dedicated on the 14th of April, 1842.



This fine building, which is of brick, was constructed from the designs and under the superintendence of Mr. Henry Searle, of Burlington, at an expense of about \$90,000. Its dimensions are 92 by 61 feet. The front is a hexastyle Ionic portico, with columns from the temple on the Ilissus, surmounted by a square base, from which arises a cupola taken from the choragic monument of Lysicrates, fully wrought out, with the omission of the panels and tripods. The interior is in a rich and chaste style of finish, with panelled ceiling, Corinthian columns and pilasters, and a narrow gallery upon three sides resting upon columns from the Tower of the Winds. It is warmed by hot air furnaces, and the whole edifice is among

the most tasteful and commodious houses of worship in New England.

The Unitarian house of worship was erected in 1816. It is one of the largest meeting houses in the state, is built of brick with a lofty steeple, and, together with the organ, clock and bell, cost about \$23,000. Mr. Clark, who was settled over this society in 1810, resigned his charge on the 18th of February, 1822, on account of ill health, and was succeeded by the Rev. George G. Ingersoll, the present pastor, who was ordained on the 30th of May, following. This society is large and wealthy. The Methodist society was organized as early as 1820, and in 1832 they erected a neat brick chapel. They are supplied by local preachers, who are stationed for two years at a time. Rev. S. D. Brown is their present minister. The Baptist church was organized in 1834, the Baptists here previously belonging to the church in Williston. This church and society have a small chapel in the eastern part of the village, and are under the pastoral care of Rev. Hiram Safford. They are about erecting a new and elegant house of worship, in a central part of the village. The Episcopal church was organized in April 1831, by the name of St. Paul's Church. In the summer of this year the Rev. George T. Chapman, D. D. was employed by this society, and in the fall they commenced the erection of a church which was completed and consecrated the next year. This building, which is of stone, is of the Gothic order of architecture, and the interior is neatly finished. Including its excellent organ and bell, it cost about \$9,000. Dr. Chapman resigned the rectorship in Sept. 1832, and in November following, was succeeded by the Rt. Rev. John H. Hopkins, bishop of the Diocese, who is the present rector. Confirmations in this church since 1832, 206—present communicants, 131. For an account of the Roman Catholic church in this town, the reader is referred to part second, page 202. The greater part of the surface of this township is considerably elevated above the lake, but the soil in general is not of the best quality. The variety of soil is, however, very considerable. Below the lower falls on Winooski river, is an extensive tract of intervale, which is not surpassed in beauty and fertility by any in the country. The up-land in the northeastern part was originally timbered with pine, and the soil is sandy and light. In the southern part the timber is mostly hard wood, and the soil clay and loam. The soil of the declivity, occupied by the village, is compact and firm, and very mild.

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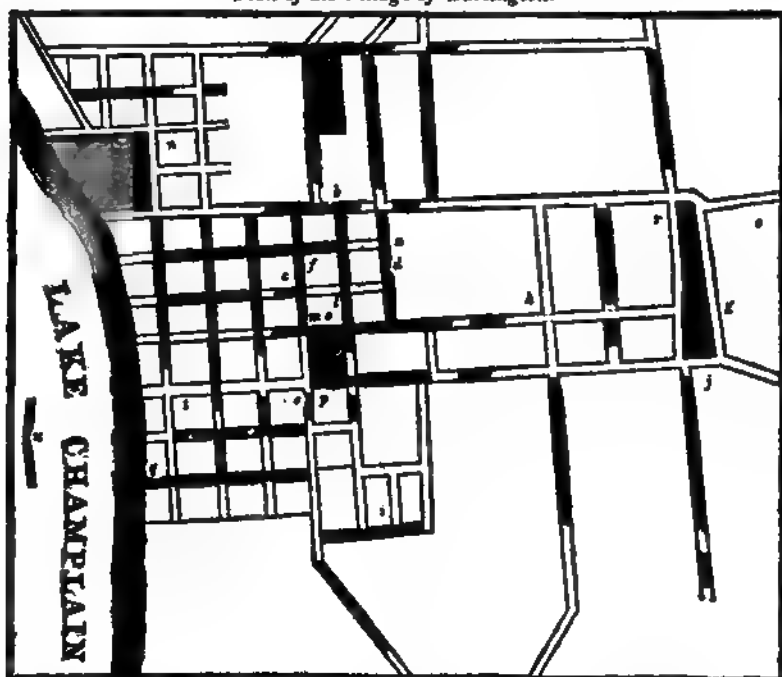
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ble for building ground. This township has lake Champlain on the west, Muddy brook on the east, and Winooski river on the north. The latter is crossed by two good bridges leading to Colchester, and at the lower falls affords abundant water power for all kinds of machinery. From these falls to the mouth of the river it is 5 miles, while it is only 2 miles from them to the wharves in Burlington bay. The lower bridge crosses the river at the head of the lower falls. It is substantially built and well covered, and consists of three arches of about 80 feet span. The other bridge is a mile above and is called

the "High Bridge." This bridge is over a chasm, worn in the rocks by the river, which is much visited as a curiosity. This bridge is only 75 feet in length but, at low water, it is 80 feet above the surface of the river. The rocks in the eastern half of the township are lime stone, and from them large quantities of lime are manufactured. In the western half they are sand stone and are extensively quarried for buildings and underpinnings. Among the sand rocks in the southwestern part of the township, is an excavation called the "Devil's Den," which is sometimes visited as a curiosity.

Plan of the Village of Burlington.



References.

a. Congregational Church.
b. Unitarian Church.
c. Episcopal Church.
d. Methodist Chapel.
e. Baptist Chapel.
f. Roman Catholic Church.
g. University.

h. Boys' High School.
i. Female Seminary.
j. Medical College.
k. Court-house.
l. Burlington Bank.
m. Farmers & Mechanics Bk.
n. Glass Factory.

o. Howard's Hotel.
p. American Hotel.
q. Exchange Hotel.
r. Pearl-street House.
s. Franklin Hotel.
t. Jenner's Hotel.
u. Bank-water.

Burlington Village, a ground plan of which is given above, is not surpassed in beauty of location by any town or village in New England. It lies on the east shore of Burlington bay, and occupies a gentle declivity descending towards the west, and terminated by the waters of the lake. The principal streets running east

and west, are one mile in length, and these are intersected at right angles with numerous streets running north and south and cutting the whole village into regular squares. A large share of the business on lake Champlain centres at this place, and the town is rapidly increasing in wealth and consequence. There are regular daily

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CABOT.

lines of steamboats between this place and Whitehall, between this and St. Johns and between this and St. Albans, by way of Port Kent and Plattsburgh, besides numerous arrivals of irregular boats, sloops, &c. The boats from Whitehall and St. Johns arrive each day, Sunday excepted, about 7 o'clock, P. M. and remain about an hour to unload and take on board passengers and merchandize. The boat which runs to Port Kent, Plattsburgh, and St. Albans, leaves Burlington each morning at half past seven, and returns about 6 o'clock, P. M. There are here three extensive wharves with store houses, at which the greater part of the merchandize designed for the northwestern section of Vermont is landed. For the safety of the navigation, a light house has been erected on Juniper island, at the entrance of Burlington bay; and for the security of the anchorage before the town, a break-water has been commenced here at the expense of the general government*. There are three lines of mail stages, which arrive and depart daily, one to the north, one to the east, and one to the south. Besides these, there are several stages which arrive and depart twice or thrice a week. The stages generally leave in the morning and arrive in the afternoon before the departure of the line boats for Whitehall and St. John's. The trade of this place is principally with New York, although Boston, Troy and Montreal have a share, and the amount of mercantile business transacted here, does not fall much short of a million of dollars annually. The first regular mercantile store was opened in Burlington, in the fall of 1789. It was built by Stephen Keyes, Esq. and placed under the charge of Mr. Orange Smith. The second store was opened by Mr. Zacheus Peaslee. In the year 1800, the number of stores had increased to six. They now exceed 30, and several of them do business amounting to from \$50,000, to near \$300,000 each, annually. The village contains about 400 dwelling houses, and about 3000 inhabitants. The public buildings are the University buildings, six churches, court house and jail, high school for boys, female seminary, and two banks. The University† buildings consist of four spacious edifices, located upon the summit at the eastern extremity of the village, one mile from the lake, and 281 feet above its surface, and command one of the finest prospects in the United States. The view from the dome of the centre University building, embraces the village—the lake with its bays and islands—its steamboats

and sloops—Winooski village, and Winooski river dashing through frightful chasms, and then winding its way through the verdant and beautiful meadows at the north—and, more remote, hills and dales and farms and woodlands,—and last of all the circuit of lofty mountains, whose peaks and summits form the grand outline, and render the prospect one of the most interesting and delightful which our country affords. *Winooski village* is situated at Winooski lower falls, one and a half miles from Burlington village. A portion of this village, containing some mills and machinery lies on the Burlington side of the river, but it is principally in Colchester, under the name of which town it will be more fully described. *Statistics of 1840.*—Horses, 351; cattle, 1,455; sheep, 6,642; swine, 3,917; wheat, bu. 2,462; barley, 28; oats, 10,183; rye, 4,246; buckwheat, 1,427; Indian corn, 11,450; potatoes, 45,098; hay, tons, 4,241; sugar, lbs. 340; wool, 10,660. Population, 4,271.

BURLINGTON BAY, a large open bay, lying west of Burlington village, between Appletree point on the north and Pottier's point on the south and embracing the entrance into Shelburne bay.

CABOT, a post township 6 miles square, in the western part of Caledonia county, in lat. 44° 23' and long. 4° 42', and is bounded north by Walden, east by Danville and Peacham, south by Marshfield, and west by Monroe. It is 18 miles north easterly from Montpelier, and 65 north from Windsor. It was granted November 6, 1780, and chartered August 17, 1781, to Jesse Leavenworth and his associates. The settlement of the town was commenced on what is called *Cabot Plain*, in April, 1785, by James Bruce, Edmund Chapman, Jonathan Heath and Benjamin Webster, with their families. The females came into the town on snowshoes, and were obliged to suffer many privations and hardships. This plain is situated on the *height of lands* between Connecticut and Winooski river, and commands an extensive and beautiful prospect, the outlines of which are formed by the western range of the Green mountains and by the White mountains, in N. H. The religious denominations are Congregationalists, Methodists, and Baptists. This town is the native place of the late Zera Colburn, who, at the age of five or six years, astonished the world by his extraordinary powers of computation. The surface of this town is generally uneven and the soil hard. The timber is mostly hard wood, with some hemlock and spruce. It is watered by Winooski river, which is formed of several

* For an account of the Light House and Break-water, see part second, page 216. † Part 2d, p. 144.

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branches in this town, and affords here several mill privileges. *Joe's* and *Molly's* pond lie in the northeast part of the township. The waters of the former pass by *Joe's* brook and Passumpsic river into the Connecticut, while those of the latter pass by *Winooski* river into lake Champlain. At the centre is a small village, in which are a meeting house, erected in 1823, a store, a tavern, and some mills and other machinery. *Statistics of 1840.*—Horses, 334; cattle, 1,943; sheep, 7,045; swine, 1,178; wheat, bu. 3,388; barley, 1,056; oats, 12,078; Ind. corn, 1,768; potatoes, 70,487; hay, tons, 4,489; sugar, lbs. 54,715; wool, 13,316. Population, 1440.

CALAIS, a post town in the north part of Washington county, is in lat. 44° 22' and long. 4° 52', and is bounded north by Monroe, east by Marshfield, south by Montpelier and west by Worcester; it is 37 miles east from Burlington, and 62 north from Windsor, was granted Oct. 21, 1780, chartered August 15th, 1781, to Jacob Davis, Stephen Fay and their associates, and contains 36 square miles. The principal proprietors and first settlers of this township were from Charleston, Massachusetts, and its vicinity. In the summer of 1783, the proprietors sent a committee consisting of Colonel Jacob Davis, Capt. Samuel Robinson and others, to survey a division of this town of 160 acres to the right. A Mr. Brush, from Bennington, was the surveyor. The committee and surveyor found their way to Calais with their necessary stores, and after running four lines on the north side of the first division, they abandoned the survey. Of their stores, then left, was a much valued keg, containing about 10 gallons of good W. I. Rum, which in council, they determined should be buried, which ceremony was said to have been performed with much solemnity, and a sturdy maple, towering above the surrounding trees, on the westerly side of Long Pond, with its ancient and honorable scars, still marks the consecrated spot. In August, 1786, Capt. Samuel Robinson, E. Waters, J. Tucker, E. Stone, and Gen. Parley Davis came from Charleston to this town, to complete the survey of the first division and survey another. This party, after arriving at the settlement nearest this place, which was at Middlesex, laden with provision, cooking utensils, blankets, axes, surveying instruments, &c. passed a distance of 13 or 14 miles to the camp, erected by the party who commenced the survey three years previous; often on the way expressing their anxiety to arrive, that they might

regale themselves with the pure spirit which had been permitted to slumber three years; and which they imagined must be much improved in quality by its long rest; but judge of their surprise, astonishment and chagrin, when on raising the earth, they discovered the hoops had become rotten—the staves parted, and the long anticipated beverage had escaped.* The settlement of this town was commenced in the spring of 1787, by Francis West from Plymouth county, Mass., who commenced felling timber on a lot adjoining Montpelier. The first permanent settlers, however, were Abijah, Asa and P. Wheelock, who started from Charleston June 5th, 1787, with a wagon, two yoke of oxen, provisions, tools, &c. and arrived at Williamstown, within 21 miles of Calais, the 19th. They had hitherto found the roads almost impassible, and here they were obliged to leave their wagon, and, taking a few necessary articles upon a sled, they proceeded towards this town, cutting their way and building causeways as they passed along. After a journey of two days and encamping two nights in the woods, they arrived at *Winooski* river, where Montpelier village is now situated. Here Col. Jacob Davis had commenced clearing land and had erected a small log hut, where they left their oxen to graze upon the wild grass, leaks and shrubbery, with which the woods abounded—proceeded to Calais and commenced a resolute attack upon the forest. They returned to Charleston in October. Francis West also left town, and returned the following spring, as did also Abijah and Peter Wheelock, accompanied by Moses Stone. They this year erected log houses, the Wheelocks and Stone returning to Massachusetts to spend the following winter, and West to Middlesex. In this year, also, Gen. Parley Davis, then a new settler, and now a resident of Montpelier centre, cut and put up two or three stacks of hay upon a beaver meadow, in Montpelier, upon a lot adjoining Calais, a part of which hay was drawn to Col. Davis in Montpelier in the following winter, which served partially to break a road from Montpelier to Calais line. In February or March, 1789, Francis West moved his family on to his farm, where he lived several years. Also, in March of this year, Abijah Wheelock, with his family, Moses Stone, Samuel Twiss with his new married lady, accompanied by Gen. Davis, from Charleston, arrived at Col. Davis' house in Montpelier, with several teams. His house was

* Whatever tears were shed, or groans uttered at the burial of the keg, they were not to be compared with the bitter agonies of its disinterment.

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a mere rude hut, constructed of logs 20 feet in length, with but one apartment, a back built at one end for a fire place, and covered with bark, with a hole left in the roof for the smoke to escape; and this on their arrival they found to be pre-occupied by several families, emigrants from Petersboro', N. H.; and in that mansion of felicity there dwelt for about a fortnight three families with children in each, one man and his wife, recently married, three gentlemen then enjoying a state of single blessedness, and a young lady; and among the happy group were some of the first settlers of Calais. On the 13th of April, racket paths having been previously broken, Messrs. Wheelock, Twiss and Stone prepared handsleds, loaded thereon their beds and some light articles of furniture, accompanied by Mrs. Wheelock and Mrs. Twiss, and Gen. Davis, proceeded to this town over snow three feet in depth, Mrs. Wheelock travelling the whole distance on foot and carrying in her arms an infant four months old, while their son about two years of age, was drawn upon the handsled. Mrs. Twiss, the recently married lady, also performed the same journey on foot, making use of her broom for a walking cane. During the day the snow became soft and in crossing a marshy piece of ground, Mrs. Twiss slumped with one foot, and sank to considerable depth and was unable to rise; Gen. Davis, with all the gallantry of a young woodsman, pawed away the snow with his hands, seized her below the knee and extricated her. This incident was a source of no small merriment to the party generally, of mortification to the amiable sufferer, and of gratification to Mrs. Wheelock, who felt herself secretly piqued that Mrs. Twiss did not at least offer to bear her precious burden some part of the distance. They arrived in safety the same day, and commenced the permanent settlement of the town. A large rock, now in the orchard on the farm owned by Dea. Joshua Bliss, once formed the end and fire place to the *Log Cabin* of the first settlers of Calais. In September of this same year, 1789, Peter Wheelock moved his family, consisting of a wife and six children, to this town. In 1790, James Jennings arrived with a family. Lucinda, daughter of Peter Wheelock, was born this year and was the first child born in town. On this occasion it is said one woman travelled 4 miles, on foot, through the woods in a very dark night. In 1793, the first saw and grist mill were erected near the centre of the town, by J. Davis, of Montpelier, and Samuel Twiss. During this

and the succeeding year, considerable additions were made to the settlement. In the winter of 1794, Mr. Jennings, of this town, being upwards of 60 years of age, lost his life by fatigue and frost, while on his return through the woods from Montpelier to this place. There was not at this time a sufficient number of men in town to constitute a jury of inquest. It was in this town that the Hon. Timothy Stanly lost his foot by frost, in 1788. The town was organized March 23, 1795. Peter Wheelock was first town clerk, Jonas Comins, first constable, Joshua Bliss, first select man, by the unanimous suffrage, of 17 legal voters. The town was represented in October following by Peter Wheelock. The first settlers of Calais experienced all those privations and hardships which are incident to the settlers of new townships generally. They located themselves at some distance from each other, and it was not uncommon for a woman to travel several miles to visit a neighbor and return home after dark through the woods, brandishing a firebrand to enable her to discover the marked trees. For one or two years the settlers brought the grain for the support of their families, and for seed from Williamstown, Brookfield and Royalton a distance of 30 miles or more. After they began to raise grain in town, they had to carry it 15 miles to mill. This they did in winter, by placing several bags of grain upon the neck of an ox, and driving his mate before him to beat a path. There are here five religious societies, viz. Baptists, Congregationalists, Universalists, Methodists and Freewill Baptists, and the greatest harmony prevails among them. There is also a society of Free Enquirers in this town, which was organized March 1, 1835. There is but one meeting house in town, and that is occupied alternately by the different religious sects. There is, however, a spacious town house and 15 commodious school houses, all of which are occasionally used for the purpose of holding meetings. For some time after the settlement of the town, there was no physician within 25 miles of this place. The people here have been generally healthy. Abijah Wheelock and wife, heretofore mentioned as principals among the first settlers, now, at the advanced age of 76, reside in town, surrounded by 11 children, death never having occurred in the family; they still are hale, comparatively vigorous, and withal very laborious. The old gentleman has repeatedly, after having cleared and improved a farm, exchanged it for a new one, and within a few years commenced on a lot almost wild,

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and is every year seen at his old occupation of clearing land, though not upon so extensive a scale as in an earlier day. He is occasionally heard to remark when speaking of "olden times," that he supposes himself to have been once the most respectable man in town, inasmuch as he, at an early day, remained here one week when no other human being was within the limits of the township. This township is watered by two branches of Winooski river, one entering it near the northeast, the other near the northwest corner. They unite near the south line of the town, affording, in their course, a great number of valuable privileges for mills and other machinery. It is also well watered with springs and brooks. The soil is a warm loam, easily cultivated, well adapted to the production of all kinds of grain and is not inferior to other towns in its vicinity for grazing. The surface of the township is somewhat uneven, but very little of it so broken as to be incapable of cultivation. The timber on the streams is mostly hemlock, spruce and pine; on the higher lands, maple, beech, &c. The lowest lands here are in general driest and the most feasible soil. The north line of the township intersects two considerable ponds. There are several other small, but beautiful ponds lying within the township, and which abound with trout and other fish. Long pond lies in the northwest part of the town. In one autumn, 2,000 lbs. of trout were taken from this pond with a hook, which sold for \$8 per cwt. In the spring of some years, at the inlet of this pond, more than two tons of fish have been thrown out of the channel with the hands and with baskets. There are several springs in town, whose waters are quite brackish; their medicinal qualities, however, have never been thoroughly tested. There are 11 saw mills, 5 grist mills, 1 store, and 2 post offices, in town. *Statistics of 1840.*—Horses, 252; cattle, 2,919; sheep, 5,409; swine, 666; wheat, bu. 3,630; barley, 152; oats, 18,473; rye, 578; buck wheat, 1,394; Ind. corn, 5,089; potatoes, 24,246; hay, tons, 5,899; sugar, lbs. 24,420; wool, 14,160. Population, 1079. s. w.

CALDESBURGH.—This name was altered to Morgan, October 19, 1801. See *Morgan*.

CALEDONIA COUNTY is bounded northeast by Essex county, east by Connecticut river, which separates it from Grafton county, N. H. south by Orange county, west by Washington county, and northwest by Orleans county. It lies between 44° 9' and 44° 45' north lat. and between 4° 25' and 5° 4' east long. and contains

about 700 square miles. This county was incorporated November 5, 1792. Danville is the seat of justice. The Supreme Court sits here on the 7th after the 4th Tuesday in January, and the County Court on the first Tuesday in June and December, annually. The Passumpsic and some smaller tributaries of the Connecticut, water the east part of the county, and Winooski river is formed in the western part. The Lamoille river rises near the northwest corner. The height of lands, or eastern range of the Green Mountains, extends through the western part of the county. Between this range and the Connecticut, and along the Passumpsic, is a fine farming country, with several pleasant villages. *Statistics of 1840.*—Horses, 5,852; cattle, 32,668; sheep, 100,886; swine, 18,991; wheat, bu. 52,109; barley, 12,291; oats, 342,433; rye, 1,799; bu. wheat, 12,005; Ind. corn, 52,350; potatoes, 1,066,848; hay, tons, 67,077; sugar, lbs. 665,397; wool, 183,198. Population, 21891.

CAMBRIDGE, a post town in the western part of Lamoille county, in lat. 44° 38' and long. 4° 11', is bounded northeasterly by Waterville and a part of Fletcher, easterly by Sterling and a part of Johnson, south by Underhill, and westerly by Fletcher, is 30 miles northwest from Montpelier, and 22 northeast from Burlington, was granted Nov. 7, 1780, chartered to Samuel Robinson, John Fasset, jr. Jonathan Fasset, and their associates, August 13, 1781, and contains 28,533 acres. The first settler of this town was John Spafford. He came into town May 8, 1783, planted two acres of corn, which was overflowed with water in the fall, and nearly all destroyed. He moved his family, consisting of a wife and two children, into town from Piermont, N. H. in November. The town was surveyed, this year, by Amos Fasset. In 1784, Amos Fasset, Stephen Kinsley, John Fasset, jr. and Samuel Montague moved their families here from Bennington, and Noah Chittenden his from Arlington, Vt. The first saw mill was built, this year, by Amos Fasset. Thirty-five persons spent the second winter here. In 1785, David Safford and others moved into town from Bennington.* When Mr. Spafford came into town, there were no inhabitants or road between this place and Hazen's road in Craftsbury, and they who came from Bennington, had to cut their road for ten miles through the woods. The first set-

* Mr Safford was one of the Spartan band who defended the house of James Breckenridge, against the New York Sheriff and his posse. See part second, page 21.

CAMBRIDGE.

CAMEL'S HUMP.

CANAAN.

tlers brought their provisions with them, and when their meat failed, they hunted the moose. The first improvements were made on the flats along the Lamoille, the waters of which frequently swept away or spoiled in fall the products of summer. The crops of pumpkins frequently floated away and landed safely on the shores of Grand Isle. When their mill dams were swept away, the people ground their grain in mortars, which they called *plumping mills*. They were made by burning a large cavity in the top of a stump, and suspending a large *pestle* to a spring pole. The town was organized March 29, 1785, and John Fasset was first town clerk. David Safford was first representative and John Safford taught the first school in town. The religious denominations are Congregationalists, Baptists, Episcopalians, and Methodists. The Rev. Elijah Woolage was settled over the Congregational church in 1805, and dismissed in 1806; the Rev. John Truair, November 21, 1810, and dismissed in 1812. The Rev. Royal A. Avery was settled in 1824. Their meeting house was erected in 1805, in the village called the *Borough*. The first Elder of the Baptist church was Joseph Call who was succeeded by Elder Samuel Holmes, who died in 1813. The dysentery prevailed here in 1806, and was very mortal. In Cambridge, 21 died, and as many more along the river in its immediate vicinity. The river Lamoille enters this town on the east side one mile from the northeast corner, and after running a serpentine course of 12 miles, in which it receives north branch from the north, and Brewster's river and Seymour's brook from the south, passes the west line of the town, one mile from the southwest corner. These streams afford numerous mill privileges. The surface of the town is uneven, and, in some places rough. The land is, however, generally good, and on the river are about 5000 acres of valuable intervale. A branch of dead creek, which is a branch of Missisco river, rises in this town, and another branch of said creek issues from Metcalf pond in Fletcher, and runs across the northwest corner of the town. The town is well watered, and the timber of various kinds. There are three small villages. The village called the *Borough*, is on the south side of the river Lamoille, in the southwest corner of the town, on the post road, and contains a Congregational meeting house, 3 stores, 2 taverns, and mills and other machinery. The *centre village* is on the south side of the Lamoille near the centre of the town, west of Brewster's river, and contains a meeting house a

store, tavern, trip hammer shop, fulling mill, &c. The town meetings and the meetings of the Baptist society for religious worship are held here. The other village is one mile north of the *Borough*, and is called the *Harbor*. The old Spartan, David Safford, settled here with several of his friends. The town is divided into 12 school districts. There are two grist mills, with two run of stones each, six saw mills, two clothier's works, two carding machines, one trip hammer shop, five stores, three taverns and one tannery. *Statistics of 1840.*—Horses, 644; cattle, 3,180; sheep, 8,370; swine, 1,228; wheat, *bu.* 3,531; barley, 15; oats, 10,606; rye, 291; buckwheat, 89; Indian corn, 6,436; potatoes, 73,100; hay, *tons*, 5,329; sugar, *lbs.* 64,111; wool, 19,091. Population, 1,790.

CAMEL'S HUMP, next to the Chin in Mansfield, is the most elevated summit of the Green Mountains. It is situated in the eastern part of Huntington, near the west line of Duxbury. Its height above tide water has been computed to be 4,188 feet, and 3,600 feet above the site of the State house, at Montpelier. It is 17 miles west of Montpelier, 25 northeasterly from Middlebury, and 20 southeast from Burlington. This summit is conspicuous from the whole valley of lake Champlain, and the prospect which it commands is hardly surpassed in extent and beauty. The summit is hardly accessible except from the north. It is usually ascended by way of Duxbury, where carriages can approach within about 3 miles of the summit. The remainder of the way can be passed on foot without difficulty, excepting about half a mile which is very steep and rugged. The rocks which compose the mountain are wholly of mica slate, and the Hump is nearly destitute of soil or vegetation, only a few mosses, stunted shrubs and alpine plants being met with. This mountain is often erroneously called *Camel's Rump*.

CANAAN, a post town, lying in the northeast corner of Essex county, and entirely at the northeastern extremity of the state. It is in lat. 44° 57' and long. 5° 22', and contains about 29 square miles. It is bounded north by Hereford, Canada, east by Connecticut river, and southwest by Lemington and Averill. It lies opposite Stewartstown, N. H. The northeast corner of the town is the most easterly land in Vermont, and lies in long. 5° 29' east, and 71° 33' west from Greenwich. This town was granted to William Williams, Jonathan and Arad Hunt, and others. February 26, 1782, it received a new charter, and October 23, 1801, the town

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of Norfolk was annexed to it. The first settlers were Silas Sargeant, John Hugh, and Hubbard Spencer, who removed their families into Canaan in 1785, and in 1791, there were 19 persons in town. Canaan being a frontier town, was subject to considerable disturbance during the last war with Great Britain, some account of which has already been given in part second, page 95. The religious denominations are Congregationalists, Freewill Baptists, and Methodists. This township is well watered by Leach's stream, Willard's brook, &c. which afford good mill privileges. The former is two rods wide at its junction with the Connecticut, Leeds pond from which it issues is partly in Canada. There is some fine intervalle on the Connecticut, and much good land in other parts. *Statistics of 1840.*—Horses, 119; cattle, 670; sheep, 1,706; swine, 459; wheat, bu. 692; barley, 483; oats, 3,320; buckwheat, 6,706; In. corn, 285; potatoes, 26,400; hay, tons, 1,451; sugar, lbs. 11,450; wool, 2,711. Population, 378.

CARTHAGE. Name altered to Jay.—*See Jay.*

CASPIAN LAKE. *See Greensborough.*

CASTLETON, a post town situated near the centre of Rutland county, being 10 miles west of Rutland, 13 east of Whitehall, N. Y., 65 north of Albany, and 60 southwest of Montpelier. Lat. 43° 34', long, 3° 56'. Bounded south by Poultney, east by Ira, north by Hubbardton, west by Fairhaven; containing 36 square miles. The charter was granted to Samuel Brown of Stockbridge, Mass., Sept. 22, 1761. Col. Amos Bird of Salisbury, Ct. became the principal proprietor, and, in company with Col. Noah Lee, made the first surveys in June, 1766. The first dwelling house was erected in August, 1769, of which Col. Lee and his servant were the sole inhabitants the following winter. In 1770, Ephriam Buel, Eleazer Bartholomew and Zadock Remington, with their families, settled in this town; and were soon followed by Cols. Bird and Lee. The first inhabitants were chiefly emigrants from Connecticut. The enterprise and worth of Cols. Bird and Lee entitle them to a prominent place in the early history of Castleton; the former died in the midst of active benevolent exertions for the infant settlement, September 16, 1762. His solitary monument on the banks of Castleton river, and an isolated mountain in the southeast corner of the town, are memorials of his name, still associated with the remembrance of his worth. Col. Lee was vigilant and active amidst the hardships and dangers which were encountered by the first settlers, under the govern-

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ment of New Hampshire, and the council of safety, and the vexatious embarrassments consequent to the claims of jurisdiction by the state of New York. At the commencement of the war of American independence, he entered the army with a commission, and after sharing in its toils and honors, the return of peace brought him again to the bosom of his family. Possessing a vigorous constitution, he continued long to witness the rising greatness of his country, and to enjoy the benefits for which he had toiled. He died in May, 1840, aged 97 years. During the war for independence, the people of Castleton were often alarmed and once invaded by the British and Indians. On the 6th of July, 1777, Gen. Fraser sent a detachment under the command of Capt. Fraser, who attacked, by surprise, about 20 militia, who were posted near the present site of the village, under the command of Capt. Wells. Capt. Williams, a volunteer, of Guilford, Vermont, was killed, and Capt. Hall, of Castleton, mortally wounded, and his son, Lieut. Hall, and some others were taken prisoners, and carried to Ticonderoga. Lieut. Hall, his brother and a Mr. Kellogg, made their escape from the fort, re-crossed the lake in a canoe by night, and after great privations, eluded their savage pursuers and returned to their homes. On the spot where Williams fell, was erected a fort, the ensuing year, which was furnished with 2 pieces of cannon, and garrisoned under different commanders until the return of peace. The graves of about 30 soldiers, whose names have long been forgotten by their countrymen, are still visible near the site of the fort. Castleton was organized in March, 1777. Jesse Belknap was the first town clerk and justice of the peace. Zadock Remington was the first representative. There are three organized religious societies, Congregationalists, Methodists, and Roman Catholics. The Congregational church, which is the most numerous, was organized in 1784. Rev. Matthias Cazier was the first minister, and was settled by the town, Sept. 5, 1789, and dismissed, Dec. 13, 1792. Rev. Elihu Smith was installed Jan. 17, 1804, and dismissed Dec. 13, 1826. The present pastor, Rev. Joseph Steele, was installed Dec. 25, 1823. This church consists of 270 members. Their house of worship is large and commodious, and was built in 1833. The Methodist society was more recently organized, but is also considerably numerous. Their meeting house, a neat and convenient edifice, was erected in 1824, since which time they have been regularly supplied with local preachers;

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their present minister is Rev. Josiah Brown. Each religious society possesses a parsonage, and each may be regarded as in a prosperous condition. There is considerable variety in the soil and surface of Castleton. The rocks are chiefly argillaceous, occasionally traversed by veins of quartz, and occasionally alternating with, or enclosing large masses of the latter rock; small quantities of secondary lime stone are found in a few localities. Specimens of oxide of manganese are found in the vicinity of Bird's mountain, in the southeast part of the town. The rocks are disposed in elevated ridges in the eastern and northern sections, and are in some places abrupt and precipitous; but for most part covered with fertile arable soil. The south west part is a pine plain, in some places intersected by slate rock and ridges of slate gravel. The larger streams are generally bordered by rich alluvial intervals, which, in some instances, are broad and extensive. The soil of the plains is sandy and light; on the hills it is slaty gravel, loam and vegetable mould; these soils are rendered much more productive by the use of plaster of Paris; that of the intervals is strong and productive, in many places however requiring drainage. The cultivated crops are grass, Indian corn, oats, rye, wheat, b'k wheat, potatoes, &c. The agricultural interest is chiefly vested in sheep, neat cattle, horses, and swine. Lake Bombazine lies principally in Castleton, its northern extremity extending a short distance into Hubbardton. It lies in a basin of rocks, which, in some parts, is of great depth; it is 8 miles long, and its greatest breadth is 2½ miles; an island containing about 10 acres is situated near the centre of this lake; being provided with a grove and a cottage, it is a pleasant summer resort for parties of pleasure, and adds much to the beauty of the scenery. The outlet of the lake, at its southern extremity, has sufficient declivity and volume of water to propel a large amount of machinery. The machinery at present in operation at this place are one sash factory, one carding machine, one clothier's works, three saw mills, and one grist mill; here also is a mercantile store and a cluster of dwelling houses, called Mill village. Castleton river, which arises in Pittsford, traverses a part of Rutland, Ira, and Castleton from east to west, where it receives the waters of lake Bombazine. It afterwards unites with Poultney river in Fair Haven, and enters lake Champlain at East bay. This river and its tributary brooks furnish considerable water power, which is improv-

ed in propeling various kinds of machinery. Being increased by many abundant springs along its bed, its waters are very pure and cool in summer, and seldom frozen in winter. The diseases most common are typhus fever, inflammation of the lungs, croup, consumption, rheumatism, and in the early settlement of the town, intermittent and remittent, and inflammatory fevers, were common but are now comparatively rare. The most mortal diseases have been typhoid pneumonia, malignant typhus and canker rash, which have been epidemic. The most mortal epidemic was of typhoid pneumonia, in 1813, of which 63 persons died, who were chiefly adults.* The climate of Castleton is salubrious, with the exception of epidemics. The number of deaths in 1841, was 21, being a fraction above one per cent. of the population.

Castleton village is pleasantly situated on the southern bank of Castleton river, on a level plain, elevated about 30 feet above the stream. Main street extends half a mile in length from east to west. Seminary and Mechanic's streets extend south from Main street; West street crosses Main nearly at right angles. The number of dwelling houses is 75; population 550. The dwellings are remarkable for a uniform neatness and convenience, being a true index of the equality and moderate competence of the inhabitants. In the village are three houses of worship, a town house, two buildings of the Castleton Medical College, and one of Castleton Seminary. The Congregational and Methodist churches, and college buildings are handsomely located on the north side of Main street. The seminary edifice, which is 160 feet in length, 40 feet in breadth, and four stories high, is situated on a beautiful elevation at the head of Seminary street.† The Catholic chapel stands on the south side of Main street. In the village are 4 lawyers, 4 physicians, 1 printing office, 1 book store, 4 mercantile stores, 1 druggist's store, 3 public houses, one a temperance house, 1 grocery, 1 watchmaker, 2 tailors, 3 mantuamakers, 4 shoemakers, 1 hatter, 2 saddlers and harness makers, 2 carriage makers, 4 blacksmiths, 2 cabinet and chair makers, 4 joiners and builders, 1 oil mill, 1 grist mill, 1 furnace and 1 tannery. The Albany, Montreal, Boston and Whitehall mail routes intersect in Castleton, making 4 daily mails, and affording easy ac-

* The annual number of deaths from 1804 to 1813, inclusive, were as follows: 1804, 16; 1805, 15; 1806, 10; 1807, 20; 1808, 15; 1809, 20; 1810, 23; 1811, 24; 1812, 25; 1813, 77.

† A history of this flourishing institution was expected for our work, but it was not furnished.

CASTLETON RIVER.

CAVENDISH.

cess to the public institutions. The post office is at present a distributing office. There are in Castleton ten school districts and school houses; and usually are one or more select schools in the village; number of scholars belonging to the primary schools, 596. *Statistics of 1840.*—Horses, 322; cattle, 1,638; sheep, 14,631; swine, 890; wheat, bu. 1,752; oats, 8,876; rye, 3,306; b'k wheat, 822; Ind. corn, 10,185; potatoes, 23,915; hay, tons, 4,479; sugar, lbs. 8,660; wool, 27,631. Population, 1769. J. P.

CASTLETON RIVER originates in Pittsford, runs south into Rutland, thence west through Ira, Castleton and Fair Haven into Poultney river. In Castleton it receives the waters of lake Bombazine, and another considerable mill stream from the north. The road from Rutland to Whitehall, through Castleton village, passes along this river for a considerable part of the distance. Length of the stream about 20 miles

CAVENDISH, a post town in Windsor county, is in lat. 43° 23' and long. 4° 25', and is 60 miles south from Montpelier, and 10 miles from Windsor. It is bounded north by Reading, east by Weathersfield, south by Chester, and west by Ludlow. This township was chartered by the governor of New Hampshire, October 12, 1761, and afterwards regranted by New York. It was originally about 7 miles square. In 1793, 3000 acres were set off from the southeast corner, and constituted a separate township by the name of Baltimore. On the morning of the 30th of Aug. 1754, the Indians surprised Charlestown, N. H., and made prisoners of Mr. Labaree, Mr. Farnsworth and Mr. Johnson with his family. The savages proceeded with their prisoners and booty into the wilderness, and encamped within the present limits of this town, where Mrs. Johnson was, that night, delivered of a daughter, which she called *Captive*. Mrs. Johnson was compelled to keep on her march over the Green Mountains, and to perform a journey of 200 miles. After a captivity of some time, in which they endured many privations and hardships, this little band of sufferers were ransomed and returned again to New Hampshire, to the enjoyment of their friends and society. *Captive Johnson* is now the wife of Col. George Kimball. Near the place where Mrs. Kimball was born, a monument is erected with an inscription, of which the following is a verbatim copy. "This is near the spot that the Indians encamped the night after they took Mr. Johnson and family, Mr. Labaree and Mr. Farnsworth, August

30th, 1754, and Mrs. Johnson was delivered of her child half a mile up this brook."

"When trouble is near the Lord is kind,
He hears the Captives cry;
He can subdue the savage mind,
And learn it sympathy."

The settlement of this township was commenced in the north part by Capt. John Coffein, in June, 1769, at whose hospitable dwelling, thousands of our revolutionary soldiers received refreshments, while passing from Charlestown, then No. 4, to the military posts, on lake Champlain, nearly the whole distance being, at that time, a wilderness. On the farm, now the residence of James Smith, Esq., in the northwesterly part of the town, 20 miles from Charlestown, was another stopping place, called the "Twenty miles encampment," giving name to a small river near the head of which the encampment was situated. In 1771, Noadiah Russell and Thomas Gilbert joined Capt. Coffein in the settlement, and shared with him in his wants and privations. For several years they struggled hard for a scanty and precarious subsistence. The grinding of a single grist of corn was known to have cost 60 miles travel. Such was the situation of the roads and the scarcity of mills at this early period. Many interesting anecdotes are related of Capt. Coffein, which our limits will not permit us to insert. At one time, he owed his life to the sagacity of his faithful dog. He was returning from Otter creek, in March, 1771, while the country was perfectly new, and on account of the depth of the snow was compelled to travel on snow-shoes. While crossing one of the ponds in Plymouth, the ice broke, and he was suddenly plunged into the water. Encumbered with a large pair of snow-shoes and a great coat which he had on, he strove, but in vain, to extricate himself. He struggled about half an hour, and, in despair, was about yielding himself to a watery grave, when, at this critical moment, his large and faithful dog beholding his situation came forward to the rescue of his master. He seized the cuff of his great coat, and, aided by the almost expiring efforts of Capt. Coffein, succeeded in dragging him from the watery chasm to a place of safety. Capt. Coffein lived to see the town all settled and organized, and to take an active part in its public concerns. He was the first representative, and represented the town for a number of years. The first settlers were mostly from Massachusetts. Josiah Fletcher was first town clerk. There is a Baptist and Congregational church, and some Methodists,

CAVENDISH.

CHAMPLAIN LAKE.

Universalists, &c. but no settled minister. The epidemic of 1812 prevailed here, and about 40, mostly heads of families, were victims to it. The soil of this town is easy and generally fertile. Black river, which runs from west to east, and Twenty mile stream, which runs in a southerly direction and unites with it near White's mills, are the principal streams. Along these streams are some small tracts of fine intervale. The greatest curiosity in the town, and perhaps the greatest of the kind in the state, is at the falls on Black river, which are situated between Dutton's village and White's mills. "Here the channel of the river has been worn down 100 feet; and rocks of very large dimensions have been undermined and thrown down, one upon another. Holes are worn into the rocks, of various dimensions and forms. Some of them are cylindrical, from one to eight feet in diameter, and from one to fifteen feet in depth; others are of a spherical form from six to twenty feet diameter, worn almost perfectly smooth into the solid body of the rock." Hawk's mountain, which separates Baltimore from this town, derives its name from Col. Hawks, who, during the French and Indian wars, encamped thereon for the night with a small regular force, among whom was General (then Captain) John Stark. Some traces of their route are still to be seen. The stage road, from Weathersfield to Rutland, passes through this town along Black river. There are two villages, viz: Duttonsville, and Proctorsville. *Duttonsville* derives its name from Salmon Dutton, Esq. the first principal inhabitant, and has among other things a woollen factory, for the manufacture of broadcloths, built of stone, 100 feet by 50, and 5 stories high. It employs 75 hands, and makes daily about 140 yards. *Proctorsville* has a factory for making cassimeres, which employs 35 hands, and makes about 130 yards per day. The building is of brick, 75 by 42 feet, and 5 stories high. The post-office at Duttonsville bears the name of the town; that at Proctorsville the name of the village. One mile northwest from Proctorsville are extensive quarries of serpentine, near which, on Black river is a mill, 100 feet by 40, with 10 or 12 gangs of saws, and other machinery for polishing, are now in operation. The serpentine receives a high polish and is considered equal in beauty and superior in quality to the Egyptian marble, as it possesses the rare qualities of being unaffected by heat or acids. It makes the most excellent and elegant fire-jacks, and centre and pier tables, and quantities have

been sent to Boston and New York markets, and found a ready sale. There are in town 3 meeting houses, one free, one Baptist, and one Methodist house. The latter was built in Proctorsville in 1841. There are 8 saw, 2 grist and 2 fulling mills, 5 stores, 3 taverns, &c.—*Statistics of 1840.*—Horses, 265; cattle, 1,716; sheep, 7,124; swine, 591; wheat, bu. 1,101; barley, 57; oats, 7,996; rye, 1,798; buck wheat, 246; In. corn, 3,750; potatoes, 30,680; hay, tons, 3,620; sugar, lbs. 7,545; wool, 14,279. Population, 1,427.

CHAMPLAIN LAKE. A general account of this lake and of its name in the languages of the aborigines, has been given in part first, page 5. We had intended to insert in this place a long extract from the journal of Champlain in which he gives a minute account of his discovering and naming the lake in 1609, and of the battle in which he was engaged with the Indians, but our limits do not permit us to carry out our design. In his journal Champlain calls the outlet of lake Champlain the river *des Iroquois*, and writers who succeeded him not only continued to apply this name to the outlet of the lake but to the lake itself. Hence some have supposed that *Iroquois* was the name given to the lake by the Indians. But it seems most probable that the application of this name to the river and lake originated with the French. The great thoroughfare between the St. Lawrence and the powerful nations of the Iroquois on the Mohawk being through this river and lake, they designated them as the river and lake of the Iroquois, or the river and lake leading to the Iroquois. The name, *Corlaer* which the Indians at a later period often applied to this lake, was the name of a Dutchman, who was instrumental in saving a war party of Canada Indians from being destroyed by the Mohawks, at Schenectady, in 1665. In token of gratitude for this service the Indians afterwards applied the name *Corlaer* to every thing excellent in New York, and, among others, to this lake. Lake Champlain commences at Whitehall, at the junction of Wood creek with East bay. A mile or two north of this it receives the waters of South bay, which projects to the southwest. From Whitehall to the south part of Orwell, the average width of the lake is about half a mile. At Sholes landing, about one mile south of Mount Independence, the lake is not more than 40 rods wide, and between Mount Independence and Ticonderoga, only 80 rods. The widest place, in the lake against Orwell, is about two miles,

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and its average width about one mile. The distance from Whitehall to Ticonderoga is about 20 miles. The fortress of this name is now a heap of ruins.* It was built by the French, in 1756, on a point of land formed by the junction of lake George creek with lake Champlain, and was two miles northwest from Mount Independence, and opposite the northwest corner of Orwell. Ticonderoga is derived from the Indian and signifies noisy. The French called the fort Carillon. It was a place of great strength, both by nature and art. On three sides it was surrounded by water, and about half the other was occupied by a deep swamp, while the line was completed by the erection of a breastwork nine feet high on the only assailable ground. In 1758, Gen. Abercrombie, with a British army, was defeated in an attempt upon this fortress with the loss of 1941 men, but it was the next year surrendered to Gen. Amherst.† It was surprised by Col. Allen, May 10, 1775, at the commencement of the revolution, and retained till 1777, when it was evacuated on the approach of Gen. Burgoyne.‡ Near this place is one of the richest localities of minerals in the United States, and is a most interesting spot to the man of science. "Within the limits of four or five acres are found massive and crystalized garnet, several varieties of coccolite, augite, white and green, crystalized and massive, very beautiful adularia and common feldspar, tabular spar, hornblend, calcareous spar containing brucite, and elegant crystals of silico calcareous oxyde of titanium."—Hall. From Ticonderoga to Crown Point, a distance of 12 or 14 miles, the width of the lake continues from one to two miles. *Crown Point Fortress* is now in ruins and is opposite to the south part of Addison. || It was built by the French, in 1731, on a point of land between West bay and the lake, and was called Fort St. Frederick. In 1759, it was surrendered to the British troops under Gen. Amherst, and was held by the British till May 10, 1775, when it was taken by Col. Seth Warner, on the same day that Ticonderoga surrendered to Allen. It again fell into the hands of the British, in 1776, who kept possession of it till after the capture of Burgoyne in 1777. This fortress is in lat. 44° 3' and long. 73° 29' west from Greenwich. It is nearly a regular pentagon, the longest curtain being ninety, and the shortest about seventy-five yards in length. The ramparts are about twenty-five feet in

thickness, and reveted with masonry throughout. The ditch is blasted out of the solid rock. There are two demilunes and some small detached outworks. An arched passage led from the interior of the works to the lake, and a well about ninety feet in depth was sunk in one of the bastions. The fort erected by the French in 1731, was a smaller work, and nearer the water. The present fort was commenced by the English, in 1759, and according to Dr. Dwight, (*Travels* II, 444,) cost about two millions of pounds sterling. The whole peninsula being of solid rock, covered with a thin layer of earth, the works cannot be assailed by regular approaches, and both in construction and position, the fortress is among the strongest in North America. It has been long dismantled, and is now quite dilapidated, but its form and dimensions are still easily traced and measured. From Crown Point to Split rock, a distance of about 19 miles, the width of the lake will average about three miles and a half. The width from Thompson's Point to Split rock is only three quarters of a mile. Split rock is a considerable curiosity. A light house is erected here. At McNeil's ferry between Charlotte and Essex, N. Y., a few miles further north, the width of the lake wants 20 rods of three miles. From this place the lake spreads as it flows north, and at Burlington from the bottom of Burlington bay to that of Douglas' bay is nine miles and three quarters wide.* Upon Juniper island at the entrance of Burlington bay from the south, a light house has been erected, and a few miles to the northwest

* In 1832, the distance from the south wharf in Burlington, to the light house on Juniper island, was measured upon the ice under the direction of John Johnson, Esq. and the bearing of various places being taken from the extremities of this line by a good theodolite, the various distances were found to be as follows:

From the southwest corner of south wharf			
	m. rd.		m. rd.
To Sharpshin Pt.	1 217	To the light house	3 48
To Appletree Pt.	3 68	To Juniper island	3 28
To Port Kent	9 200	To rock Dunder	2 226
To Douglas' bay	9 193	To Pottier's Point	2 182

From the light house			
	m. rd.		m. rd.
To Pottier's Point	1 119	To Sharpshin Point	2 310
To rock Dunder	0 267	To Appletree Point	3 109

In 1821, the distance from Burlington to Douglas' Bay on the opposite, was measured on the ice, and the following soundings taken, and the depth of the lake was found to be

	feet.
At half a mile from the wharf	54
Between Sharpshin and Red Rock	73
Between Sharpshin and Pottier's Point	66
Between Appletree Point and Juniper Island	66
Between Colchester Point and Sloop Island	53
Between Providence Island and E. Brother	188
Between Valcour Island and West Brother	60
Due south of Schuyler's Island	150

* See part second, page 8, † Page 9 and 14. ‡ Page 33 and 41. || Page 6.

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CHARLESTON.

of this bay the steamboat *Phoenix* was consumed by fire on the morning of the 5th of September 1819, and much property and several lives lost.† Between Juniper island and Pottier's point, a large rock rises above the water, called rock Dunder, and to the southwest of Juniper lie four small islands called the *Four Brothers*. They were named on Charlevoix map the isles of the Four Winds. The bay opposite Burlington, called Douglas' bay, was called by the French *Corlar*, and the island lying a little to the north, called Schuyler's island, they called *Isle aux Chapon*. The greatest expanse of water is between the Four Brothers and Grand Isle, but the greatest width from east to west shore is further north across the islands, where the distance is about 14 miles. Cumberland bay, on the head of which stands Plattsburgh, N. Y., is about 22 miles from Burlington. This bay is celebrated for the signal victory of the American squadron, under Commodore McDonough, over the British fleet, on the 11th of September, 1814.† The peninsula lying north of Cumberland bay called Cumberland Head, was called by the French *Cape Scoumouton*. On this point is a light house. From South Hero to the 45th degree of lat. the breadth of the lake including the islands is from nine to twelve miles. Where the lake leaves the state on the west side of Alburgh, its width is less than two miles. The lake extends into Canada 24 miles to St. Johns, where the river Richelieu commences and conveys the waters to the St. Lawrence. The Richelieu is about 60 miles long, and joins the St. Lawrence near the upper end of lake St. Peters, and about 45 miles below Montreal. The navigation of the Richelieu is interrupted by the Chambly rapids, but the lake is connected with the St. Lawrence at Montreal, by a railroad 18 miles in length, leading from St. John's to Laprairie. The canal which connects lake Champlain with the Hudson, at Albany, is 64 miles in length, and traverses a most interesting country. "It passes in sight of the very spot where the tree stood, to which Putnam was bound, in 1757. Fort Edward and Fort Miller also recall to mind many circumstances of American history. The former was built by Col. Williams, in 1755, and its walls are now in some places 20 feet high. The unfortunate Miss M'Crea was murdered near this fort, and the trunk of the tree, to which she was bound, still remains with her name and the date, 1777, rudely inscribed upon it. It passes near the

spot where the haughty Burgoyne surrendered his sword, October 17, 1777, where Schuyler's house was burnt, and where the brave Fraser fell. The house, where that officer died, is still standing, and the rooms, occupied by the Countess Riedsell, remain unaltered."

CHARLESTON, a post town in the east part of Orleans county, is in lat. 44° 51' and long. 4° 57', and is bounded northeast by Morgan, southeast by Brighton, southwest by a part of Westmore and Brownington, and northwest by Salem. It lies 50 miles northeast from Montpelier; was granted the 6th, and chartered the 10th of November, 1780, to the "Hon. Abraham Whipple, his shipmates," and others, containing 23,040 acres. Commodore Whipple was a distinguished naval officer in the revolutionary war, and he called the town Navy, in honor of the American navy, the prowess of which he had so bravely maintained; but the name was altered to Charleston, by act of the legislature, Nov. 6, 1825. The settlement of this township was commenced in 1803, by Andrew McGaffey, who, this year, moved his family here from Lyndon. Mrs. McGaffey died October 30, of this year, which was the first death in town. In July, Abner Allyn also moved his family here, and his was the second family in town. In 1804, Joseph Seavey moved his family here; Orin Percival, his in 1805; and from this time the settlement proceeded more rapidly. The whole number of deaths in this town, up to 1894, was 13, and only three of these adults. The town was organized, March 31, 1806, and Abner Allyn was first town clerk. He was also the first representative, chosen in 1807. The Freewill Baptists are the most numerous denomination of Christians. Elder John Swazey, a Protestant Methodist, is the only resident minister, but the town is generally supplied by itinerant preachers. Ezra Cushing is the only physician. The principal stream is Clyde river, which enters the township from Brighton, and runs northwesterly, nearly through its centre into Salem. There are some falls of consequence, on this stream, particularly the Great falls, where the descent is more than 100 feet in 40 rods, but its current is, generally, slow. The alluvial flats, along this stream, are extensive, but generally too low and wet for cultivation. In the southeast part of the township are 1000 acres of bog meadow in a body upon this river. There are several considerable ponds. *Echo* pond, the most important, is in the northern part, and was named by Gen. J. Whitelaw, on account of the succession of

* See part second page 216. † Ibid. Page 26.

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echos, which are usually heard when any sound is produced in its vicinity. It is $1\frac{1}{2}$ miles long and $\frac{1}{2}$ a mile wide. The stream which discharges the waters of Seymour's lake, in Morgan, into Clyde river, passes through this pond. On the outlet mills are erected. The other pond, of most consequence, is called *Pension* pond, and lies in the course of Clyde river. These ponds abound in fish, and large quantities are annually caught. There are two small villages situated upon Clyde river about six miles apart, with a post office in each, designated as East Charleston and West Charleston. The soil of the township is a rich loam and produces good crops, and the roads and business of the town are rapidly improving. There are 8 school districts, 5 school houses, 2 stores, 2 taverns, 4 saw, 2 grist and 2 fulling mills, &c. *Statistics of 1840.*—Horses, 172; cattle, 587; sheep, 1,408; swine, 366; wheat, bu. 1,431; barley, 701; oats, 4,548; rye, 62; buckwheat, 1,560; Ind. corn 467; potatoes 26,279; hay, tons, 1,499; sugar, lbs. 23,965; wool, 2,861. Pop. 731.

CHARLOTTE, a post town in the southwest corner of Chittenden county, in lat. $44^{\circ} 18'$ and long. $3^{\circ} 49'$, and is bounded north by Shelburne, east by Hinesburgh, south by Ferrisburgh and a part of Monkton, and west by lake Champlain. It is 10 miles south from Burlington, and 10 north from Vergennes, and was chartered June 24, 1762. The first attempt to settle this town was made by Derick Webb. He first began in town in March, 1776, but soon left. He came in again, in March, 1777, and left in May, following; but no permanent settlement was made till 1784, when Derick Webb, and Elijah Woolcut moved into the town, and were followed by others, so that the town was soon after organized. John McNeil was one of the early settlers, and was the first town clerk and representative to the Legislature. In the year 1790, he located on the lake shore, and with the advantage of a good natural harbor, established a ferry from Charlotte to Essex, in the state of New York, which by the name of "McNeil's ferry" is generally known throughout the state as one of the most important, safe and well conducted ferries on the lake. The boat is propelled by six horses. Time in crossing about 30 minutes, making four trips each day. There is crossing at this ferry some weeks earlier and later in the season, than at any other ferry on the lake, with the exception of that from Burlington to Port Kent. There is a good store house and dock, with a sufficient depth of water for any boat on the lake, and a good inn for the accommodation of

travelers. There is a small village a little west of the centre, called the 4 corners, with a meeting house and parsonage, belonging to the Methodist society, built with brick in the year 1841, and well finished in modern style. Also, a female seminary, built in 1836, which is now under the superintendence of the Methodist society. There are also two stores and one tavern. At about the same distance north of the centre, there is a village of still smaller size, and also two miles east of the centre, where there is a Baptist meeting house, built with brick and well finished, in the year 1841. The Congregational meeting house stands near the centre of the town, and was erected in the year 1808. The church was organized, January 3, 1792, and on the next day the Rev. Daniel C. Gillet, was ordained over it. He was dismissed in 1799, and the church was vacant till Nov. 4, 1807, when the Rev. Truman Baldwin, was ordained over it, who was dismissed March 21, 1815. The church was then destitute till Oct. 15, 1817, when the Rev. Calvin Yale was ordained over it, who was dismissed March 5, 1833. The Rev. William Eaton was installed as pastor of the church, on the 23d of Sept. 1834, and was dismissed January 12, 1837. The Rev. Eldad W. Goodman, the present pastor, was installed July 12, 1837. The most remarkable season of mortality was in the winter of 1812 and '13, when about 70, mostly over 16 years of age, were victims to the epidemic of that period. This township is pleasantly situated on the lake shore, and is watered by the river Laplott, which runs through the northeast corner, and Lewis creek, which runs through the southern corner. The western part of the town was originally timbered with hard wood, and the soil is excellent, producing in abundance. The eastern part was principally timbered with pine, hemlock, &c. There are no elevations which deserve the names of mountains, but a range of considerable hills running through the centre of the town from north to south. From many parts of this ridge the scenery to the west is peculiarly picturesque. The lake with its islands, may be seen at a great distance. Add to this the extensive range of lofty mountains with their broken summits which lie beyond it, and it is believed that, particularly at some seasons of the year, the beauty and sublimity of the prospect is not excelled by any part of our country. The town is divided into 13 school districts. It has 4 taverns which are all *temperance houses*, 5 saw mills, 1 grist mill, and 3 stores. *Statistics*

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of 1840.—Horses, 500; cattle, 3,020; sheep, 15,865; swine, 1,396; wheat, bu. 2,195; barley, 110; oats, 13,843; rye, 1,660; buck wheat, 1,118; Ind. corn, 26,885; potatoes, 52,985; hay, tons, 9,175; sugar, lbs. 6,000; wool, 31,348. Population, 1,620.

CHELSEA, the shire town of Orange county, is situated near the centre of the county, in lat. 40° and long. 4° 30', and is bounded north by Washington and Williamstown, east by Vershire, south by Tunbridge, and west by Brookfield. It was granted to Bela Turner and his associates, Nov. 2, 1780, and chartered by the name of Turnersburgh, August 4, 1781. By the charter it contains 23,040 acres, or 36 square miles. The name was altered to Chelsea, Oct. 13, 1788. Improvements were commenced in this township in the spring of 1784, by Thomas and Samuel Moore, and Asa Bond, who, the next spring, brought in their families from Winchester, N. H. They were soon joined by others from different quarters, who settled in different parts of the town. Those who first came in brought all their furniture and provisions on their backs from Tunbridge, nine miles distant, where were their nearest neighbors. The first house in town was erected in the present burying ground by Thomas Moore, and was burned to the ground with all its contents, in September, 1785, but four or five months after his family had entered it. The first child born in town was Thomas Porter Moore, son of Thomas Moore, born Oct. 16, 1785. He is still living in the town, as are also Thomas Moore and wife. The first town meeting was held March 31, 1788, and was warned by Thomas Moredock, Esq. of Norwich. It was called to order by Thomas Porter, Esq. of Vershire, and Roger Wales was appointed moderator, Asa Bond, Joshua Lathrop, and Roger Wales were chosen selectmen, and Enos Smith town clerk and treasurer. The town was first represented in 1794, by Samuel Badger. A Congregational church was early organized here, over which Rev. Lathrop Thompson was settled in November, 1799. He was dismissed in April, 1805, and Rev. Calvin Noble was ordained over the church in September, 1807, and continued in its charge till his death in April, 1834. Rev. James Buckham was settled in February, 1835, and dismissed in Feb. 1841. There is also a flourishing Methodist society, organized in 1825. There was formerly a small Baptist society in the west part of the town, but for many years it has been without a settled minister. The township is quite hilly, but

mostly of a good soil. All kinds of grain common in Vermont, are raised with tolerable success. The timber is of various kinds, in which maple, elm, beech, birch and hemlock predominate. In a swamp in the east part of the town, tamarack grows in great plenty. Pine was formerly abundant on the streams, but it has entirely disappeared. The town has always been very healthy. The epidemic of 1812 and '13, was fatal in very few cases. Among the instances of longevity within a few years are the following:—Mrs. Woodworth died in 1836, aged 93; Mrs. Abigail Hale, in 1838, aged 95; Miss Irena Smith, in 1839, aged 91; Mrs. Perkins, in 1838, aged 88; Mr. Jacob Flanders, in 1840, aged 86. The village is situated near the centre of the town, on the first branch of White river, 13 miles from its mouth. It contains two churches, Congregational and Methodist, a court house and jail, two taverns, five stores, two groceries, three carding machines, a clothier's establishment, a trip hammer shop, two tin workers' shops, two cabinet shops, two tanneries, a printing office, a jeweller and watchmaker's shop, with various other mechanics shops, and about ninety dwelling houses. The bank of Orange county is located here, as is also the office of the Orange County Mutual Fire Insurance Company, which was chartered in November, 1838, and commenced operations in Dec. 1839. The amount insured by them is now about \$500,000. Near the west line of the town is a meeting house, owned by several different denominations, called the union house. The town is divided into 17 school districts, containing as many school houses. There are in it, two grist and ten saw mills. *Statistics of 1840.*—Horses, 340; cattle, 1,710; sheep, 6,696; swine, 971; wheat, bu. 3,177; barley, 55; oats, 11,663; rye, 86; b'k wheat, 413; In. corn, 4,427; potatoes, 47,090; hay, tons, 4,124; sugar, lbs. 18,782; wool, 11,122. Population, 1959.

R. S. H.

CHESTER, a post town on the south line of Windsor county, is in lat. 43° 17' and long. 4° 21', and is bounded north by Cavendish and Baltimore, east by Springfield, south by Grafton and a small part of Rockingham, and west by Andover, and part of Ludlow. It was first chartered by New Hampshire, February 22, 1754, by the name of Flamstead. It was rechartered November 3, 1766, by the name of New Flamstead. The settlement was commenced in 1764, by Thomas Chandler and his two sons, John and Thomas Chandler, Junior, Jabez Sargeant, Edward Johnson, Isaiah Johnson, Charles Mas,

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William Warner, Ichabod Ide, and Ebenezer Hotton, from Woodstock, Connecticut, and Worcester and Malden, Massachusetts. On the 14th of July, 1766, Thomas Chandler obtained a charter from the state of New York, for himself and 36 others, in which the town took the name of *Chester*. About the same time, the county of Cumberland was organized, and Chester became the shire town. Col. Thomas Chandler was appointed chief justice of the county court, and his son John Chandler, clerk. Chester is situate six miles west of Connecticut river, containing 48½ square miles, or 32,242 acres. It was organized in June, 1767, and Thomas Chandler, was first town clerk. The religious denominations are Congregationalists, Baptists, Restorationers, and Methodists. The Congregational church was first formed in 1773, and Rev. Samuel Whiting, was settled by this town and Rockingham, for five years; he officiated one third of the time at Chester, and the remainder at Rockingham, after which they had no settled minister for 36 years. In 1825, Rev. Uzziah C. Burnap was settled here, and continued till 1837. Rev. Silas H. Hodges was settled in July, 1837, and continued until December, 1840. This society had erected a meeting house in 1789, 40 by 50 feet, but, having become dilapidated, in 1825, it was repaired, painted, and a tower and bell added to it. Town meetings are now usually held in this house. The Baptist society was formed in 1788, and built a house 40 by 30, the same season, which they continued to occupy until 1835, in which year it was removed, and a new one of brick erected, 66 by 46, (including the projection in front.) Elder Aaron Leland was pastor of this church, from 1788 until his decease, in 1833, being 45 years. He was succeeded by Elder Jacob S. McColom, who continued 2½ years, and was succeeded by Elder Ira Person, who continued 2½ years. Elder Richard M. Ely, the present minister was settled April, 1838. The Restoration society was formed about the year 1829, and their church organized in 1832, which now consists of about 25 members. Rev. Warren Skinner, Darius Forbs, Solomon Law, A. Williams, and I. Ballou, the present minister, have supplied the desk about half the time. In 1828 the Union meeting house, owned principally by the Congregationalists and Restorationers, was built in the south village. It is 66 by 41 feet, and has a bell, weighing about 1,200 lbs. Among the distinguished persons who have resided in this town, may be mentioned, Doctor Nathan Smith, M. D., C.

I. M. S. London, professor in Yale College, and lecturer in Vermont University, who resided in Chester many years in his youth. Col. Thomas Chandler, under whose particular influence and agency, the charter under New York was obtained, was a man of quick apprehension, hasty in his movements, and dogmatical, and was said to have been instrumental in the massacre at Westminster; and afterwards died there. Thomas Chandler, junior, was also conspicuous in the formation of our state government, one of the commissioners of confiscated estates, one of the judges of the first supreme court, and first secretary of state. Elder Aaron Leland in early life, took an active part in politics, as well as religion, and filled several offices of trust in town, county and state, was town clerk, one of the select men, and representative a number of years, judge of the county court, speaker of the house of representatives, and Lient. Governor of the state. His portly appearance in person, overawed some, while his light and airy deportment, sometimes displeased others. Lucius Hubbard, Esq. educated at Yale College, was for a number of years the only lawyer in the town. He was a man of science, and died young. Daniel Heald, Esq. was one of the early settlers from Concord, Mass. where he resided at the commencement of the revolutionary war, was a soldier in the battle at Concord bridge, and in the service at Cambridge, the same season; also at Ticonderoga. In 1776, he built a log cabin in Chester, on the same lot on which he ever after resided until his death, in 1833, in the 95th year of his age. He had shared fully of the confidence of his townsmen; was town clerk 20 years, from 1779 to 1799, and 13 years represented the town in the legislature. His eldest son, Amos Heald, lives upon the same farm on which his father settled, and has been entrusted with many important offices, both by the town and state, and now, at the age of 73, is town clerk, which office he has held for the last 16 years. This office has been filled for 61 years past by three individuals, and in that time it has been necessary, in only four instances to appoint a clerk *pro tem*. William's river is formed in this township by the union of three considerable branches. These branches unite, nearly in the same place, and about one and a half miles southeast of the two villages; they constitute the principal waters, heading in the towns of Andover, Ludlow and Windham. No natural pond, cave, or Indian name or antiquity, ever known or recorded in said town. The surface is

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CHIMNEY POINT.—CHIN.

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considerably diversified with hills and vallies, but the soil is generally good; the uplands yield excellent pasturage, and when newly cleared, produce abundance of grain. The intervalles are rich and fertile, producing good crops of rye, corn, barley, oats, peas, beans, potatoes, &c. The roads are now all free, remarkably well laid, level and well wrought for such an uneven township, mainly following streams. Timber, mostly hard wood, with some hemlock, spruce and pine. Minerals, granite, actynolite, augite chlorite, common and potter's clay, cyanite, epidote, feldspar, garnet, hornblend, iron, magnetic, oxyde of sulphuret, quartz, serpentine, talc, and mica. The town is divided into twenty school districts, with 18 school houses, mostly of brick or stone, and 742 scholars, on the first day of January, 1840. An academy was incorporated, and a building 50 by 40 feet, three stories high, erected in 1814, in the south village. The school is now in a flourishing condition, under the instruction of James O. Pratt. There are two villages, called the north and south village; the north village is situated near the centre of the township, on the northerly side of the north branch of William's river. It contains one meeting house, 2 stores, 2 grist mills, 2 taverns, 2 cabinet shops, 1 attorneys office, 1 tannery, and about 25 dwelling houses. The south village is situate in a pleasant valley on the north side of the middle branch of William's river, three fourths of a mile south of the north village, and one and a half mile southeasterly of the centre of the town. It contains 1 academy, 2 meeting houses, post office, 1 woollen factory, 1 clothier's shop, 1 hatter's shop, 1 saddler's, 1 chair maker's, 1 wheelwright's, 2 blacksmith's, 2 mechanic's shops, 1 tannery, 2 taverns, 3 attorney's offices, 4 stores, and about 60 dwelling houses. The line of stages from Boston to Montreal, and from Hanover and Charlestown, to Saratoga and Albany, intersect in this village. The road from Chester to Manchester, is considered the best passage of the Green Mountains in the state, south of Montpelier, and renders this village the great thoroughfare for the travel from Maine and New Hampshire, to the state of New York, and particularly to Saratoga and Ballston springs. There are in operation in the town, 5 grist mills, 8 saw mills, 3 tanneries, 2 carding machines, 5 stores, 5 taverns, and 2 fulling mills. *Statistics of 1840.*—Horses, 486; cattle, 2,559; sheep, 10,752; swine, 1,287; wheat, bu. 1,477.; barley, 510; oats, 15,272; rye, 2,323; buck wheat, 876; Ind.

corn, 8,627; potatoes, 35,255; hay, tons, 4,490; sugar, lbs. 18,967; wool, 30,263. Population, 2,305.

CHIMNEY POINT is in Addison opposite to Crown Point and is the most westerly land in Vermont. It was upon this point that the first settlement was made in the western part of Vermont by the French in 1731, and here they erected a stone wind mill, which was garrisoned during the colonial wars, and hence it has some times been called Windmill point, but this name is now confined to a point in Alburgh.

CHIN, the name given to the north peak of Mansfield mountain in the township of Mansfield. This is the highest summit in the State, being according to Captain Partridge, 4279 feet, and according to E. F. Johnson, Esq., 4359 feet above tide water.

CHITTENDEN, a post town in the northeastern part of Rutland county, is in lat. 43° 44', and bounded northerly by Goshen, easterly by Pittsfield, southerly by Parkerstown, and west by Pittsford and a part of Brandon. It was granted the 14th and chartered the 16th of March, 1780, to Gherhom Beach and associates. The township of Philadelphia was annexed to Chittenden, November 2, 1816. The settlement of this township was commenced about the close of the revolutionary war, but much of it being mountainous remains unsettled. The religious denominations are Methodists, Congregationalists and Roman Catholics. The Methodists number about 70, of whom 10 are Protestant, the Congregationalists about 50, and the Roman Catholics 100. The Methodists erected a house of worship in 1832, and the Congregationalist in 1833. The most distinguished man who has resided here was Aaron Beach. He fought under Wolf on the heights of Abraham, served his country through the war of the revolution and was prevented only by the solicitations of friends from being with the Green Mountain Boys in the battle at Plattsburgh. The northwest part is watered by Philadelphia river, which falls into Otter creek at Pittsford. Tweed river rises in the eastern part and falls into White river. The southwestern part is watered by East creek. Near Philadelphia river, is a mineral spring, and among the mountains are some caverns, but they are little known. This town is interesting on account of its minerals. Iron ore of good quality is found here in abundance and also manganese. About 600 tons of the iron ore are raised annually, much of which is smelted at the works in Pittsford. The manganese is found at

CHITTENDEN.

CHITTENDEN COUNTY.—CLYDE RIVER.

CLARENDON.

unequal depths below the surface, and about 300 tons, worth \$35 per ton in New York, are annually sent to market. A furnace was erected in this town as early as 1792, by a Mr. Keith of Boston. In 1839, a forge was erected which makes about 500 lbs., of bar iron per day. The town contains 6 school districts, 6 saw mills, each sawing yearly 100,000 feet of boards, one store and a post office, the two latter established in 1841. *Statistics of 1840.*—Horses, 126; cattle, 481; sheep, 4,326; swine, 287; wheat bus., 1,115; barley, 5; oats, 5,032; rye, 262; buck wheat, 345; Indian corn, 2,379; potatoes, 16,830; hay, tons, 1,970; sugar, lbs. 11,790; wool, 9,202. Population, 644.

CHITTENDEN COUNTY, is bounded north by Franklin and Lamoille county, east by Lamoille and Washington county, south by Addison county and west by lake Champlain. It lies between 44° 7' and 44° 42' N. lat. and 3° 41' and 4° 14' east long. Its extent from north to south is 30 miles, and from east to west 22 miles, covering about 500 square miles. It was incorporated October 22, 1782. A few settlements were commenced in this county before the revolution, but they were all abandoned during the war. Winoski river runs through the middle of the county and falls into lake Champlain between Burlington and Colchester. The river Lamoille runs across the northwest corner, and Laplott river and some other streams water the south part. This county, except along the lake shore, where it is generally level, is uneven, but not mountainous. The soil is various, being in some places pine plain, and light and sandy; in others a rich loam, and in others a deep alluvion. The flats on the Winoski river are equal to any in the state. Burlington is the seat of justice and the principal town in the county. The supreme court sits here on the Monday preceding the first Tuesday of January; the county court on the 4th Tuesday of May and November. *Statistics of 1840.*—Horses, 4,231; cattle, 24,142; sheep, 110,774; swine, 25,310; wheat, bus., 29,502; barley 1,305; oats, 131,799; rye, 31,570; buck wheat, 11,575; Indian corn, 119,067; potatoes, 522,792; hay, tons, 56,357; sugar, lbs. 177,343; wool, 215,019. Population, 22,978.

CLYDE RIVER, has its source in Pitkin's and Knowlton's ponds, in the northeast part of Brighton, and runs a northwesterly course through Brighton, Charleston, Salem and Derby, to lake Memphremagog. Excepting a few short rapids, this is a dead, still river, until it comes within three miles of lake Memphremagog.

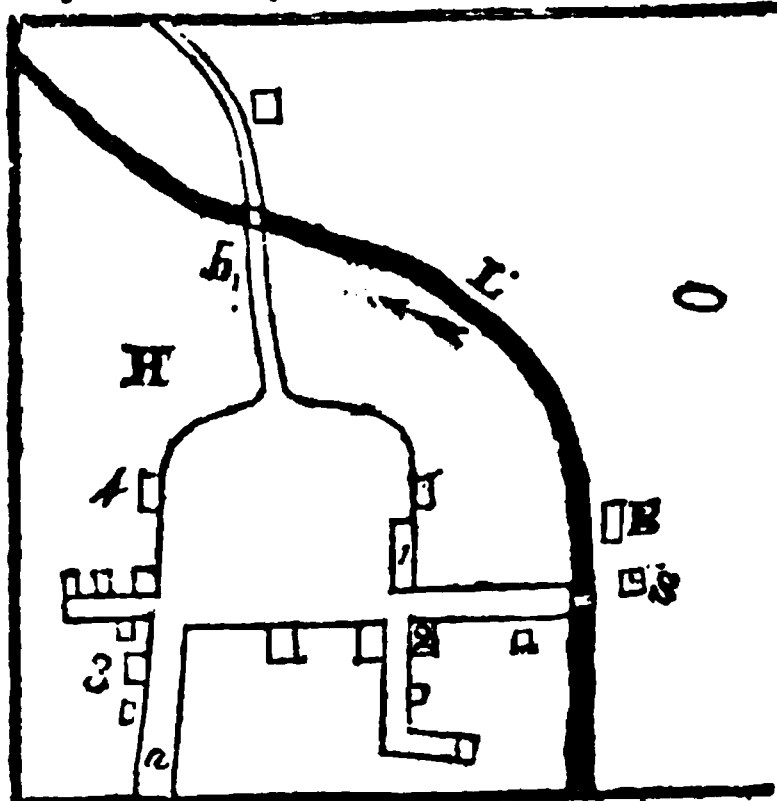
This stream runs through Round pond in Charleston and through Salem lake, a beautiful sheet of water, near two miles in length and one in width, lying partly in Salem and partly in Derby. It waters about 150 square miles.

CLARENDON, a post town in the central part of Rutland county, is in lat. 43° 31' and long. 4° 6', and is bounded north by Rutland, east by Shrewsbury, south by Tinmouth and Wallingford, and west by Ira. It is 55 miles S. from Montpelier, and 46 N. from Bennington, and was chartered September 5, 1761. It was granted both by N. H. and New York, and comprehends a part of the two grants of Socialborough and Durham. The settlement was commenced in 1763 by Elkanah Cook who was joined the same year by Randal Rice, Benjamin Johns and others. The first settlers were mostly from Rhode-Island, and purchased their lands of Col. Lideus, who claimed them under a title derived from the Indians. This title was however, never confirmed by either of the colonial governments, and the diversity of claimants occasioned much litigation, which continued till 1785, when the legislature passed what was called the quieting act. By it the settlers were put in peaceable possession of their land, and the New Hampshire title to the lands not settled, was confirmed. In consequence of these proceedings there are no public rights in town. The first town meeting on record was in 1778, and Stephen Arnold was this year town clerk, and Abner Lewis, representative. Elder Isaac Beals of the Baptist order was the first settled minister. The Congregational church was gathered here Feb. 1822 by the Rev. Henry Hunter, who was installed over the same on the 6th of November following and continued six years. The church at first consisted of 12 members; the present number is 70. Otter creek runs through this town from south to north, a little east of the centre, and receives here Mill river and Cold river from the east, which affords numerous sites for mills and other machinery. *Mill river* rises in Mount-Holly, runs nearly on the line between this town and Wallingford, receiving from the latter the waters of a considerable pond, crosses the southwest corner of Shrewsbury and falls into Otter creek near the south part of Clarendon. *Cold river* rises in Parkerstown, crosses the northwest corner of Shrewsbury and enters Otter creek near the north part of Clarendon. *Furnace brook*, called also Little West river, rises from a small pond in the south part of Tinmouth and runs north,

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parallel to Otter creek, through the west part of the town and falls into Otter creek near the centre of Rutland. Near the north line of Clarendon it receives Ira brook from Ira. Near Furnace brook are situated the *Clarendon springs*, an account of which has been given in part first, page 7. Their situation in relation to the stream, boarding houses, road &c., may be seen by the following diagram.



References.—a, the road from Tinmouth; b, road to West Rutland; S, springs; B, bathing house; 1, Clarendon House; 2, 3, 4, Public boarding houses; L, Furnace brook; H, Hill; O, High lands.

The east part of the town borders on the Green Mountains, but the principal elevations are the range of hills between Otter creek and Furnace brook, and between the latter and Ira brook on the west line of the town. The alluvial flats on Otter creek are from half to a mile wide through the town and are very productive. The uplands are a gravelly loam. Clarendon cave is situated in the westerly part of the town, and has already been described in part first, page 8. Very good marble is found here and is wrought to some extent. There are two small villages, one in the eastern and the other in the western part, with a post office at each and at Clarendon springs. There are in town 3 grist mills, 4 saw mills, 5 stores, &c. *Statistics of 1840.*—Horses, 337; cattle, 2,047; sheep, 15,922; swine, 1,015; wheat, bus., 1,663; oats, 9,358; rye, 1,385; buck wheat, 45; Indian corn, 10,936; potatoes, 44,601; hay, tons, 5,415; sugar, lbs., 24,950; wool, 40,984. Population, 1,549.

COIT'S GORE. See Waterville.

COLCHESTER, a post town in Chittenden county, is in lat. 44° 33' and in long. 3° 59', and is bounded north by Milton, east by Essex, south by Winooski river, which separates it from Burlington and Willis-

ton, and west by lake Champlain. It is 116 miles north from Bennington, and 36 miles northwest from Montpelier. It was chartered June 7th, 1763, with its present name; but from the fact that among the grantees there were ten by the name of Burling, it is supposed Burlington was the name originally intended for this town, but through some mistake was given to the town adjoining it on the south. The settlement of this town was commenced in 1774, at the lower falls on Winooski or Onion river, by Ira Allen and Remember Baker. Baker's family, consisting of a wife and three children, was the first in town.* In 1775, Joshua Staunton began improvements on the intervale above the narrows in that river, and there was a small clearing made at Mallet's bay before the revolution. From the spring of 1776, the town was abandoned by the settlers till after the close of the war, in 1783, when Messrs. McClain, Low and Boardman, settled on Colchester Point, and General Allen returned and renewed the settlement at the falls. Allen erected mills, a forge and a shop for fabricating anchors, and the place soon assumed the appearance of a considerable village. The town was organized about the year 1791, and Ira Allen was first town clerk. It was first represented in 1793, by Joshua Staunton. The religious denominations are Congregationalists, Baptists, and Methodists. The Congregational church was gathered in 1805, but have never had a settled pastor, and for a great portion of the time been destitute of regular preaching. The Baptist church was organized in 1816. Phineas Culver was settled over this church in 1820, and remained the nominal pastor till 1832. They were without a settled pastor from that time till this year when Columbus Green was ordained over it. These two churches erected a commodious brick meeting house in 1838, which they now occupy in common. The Methodists have generally been supplied with preaching and have erected a convenient brick chapel. There is, also, an organized Congregational church at Winooski village, which erected in 1839, a commodious house of worship. Thus in the space of three years were built in this town three good houses for public worship, all of brick. The only other public building is the town house. A public library was commenced in 1832, and now contains about 300 volumes. There are two small ponds in this town.

* See part second, page 31. After Baker's death in the fall of 1775, his family remained at the block house in Colchester, till the place was abandoned the following spring. The widow afterwards married Thomas Butterfield.

COLCHESTER.

CONCORD.

The largest contains about 60 acres. On the outlet to this pond are still seen the remains of beavers' works. The principal streams of this town are, the river Lamaille which runs from Milton through the northwest corner into lake Champlain; Mallets creek which also comes from Milton and empties into Mallets bay; Indian creek which runs into Mallets creek; and Winooski river on the south. The soil in the north and northwestern parts is a variety of gravel and loam, and is well adapted to grazing, though Indian corn, the English grains and the common culinary roots are successfully cultivated. The timber in these parts is principally white pine, beech, maple, birch, basswood, ash, elm, oak, walnut, butternut and some chestnut. In the middle part of the town is a large tract of pine plain, mostly covered with pitch pine and small oaks, and seems more particularly adapted to the raising of rye and corn. On the bank of the Winooski river, are large tracts of intervale. Besides the ordinary methods of enriching the soil, plaister of Paris has been used in this town with great success. The rocks in the northern and eastern parts are mostly composed of lime and slate with occasional boulders of granite; red sand stone is found in abundance near Mallets bay. Iron ore has been found in small quantities in the western part of the town, and sulphate of iron is found in the northeastern part. About the year 1812, or '13, the dysentery prevailed here extensively, and in the early settlements there were frequent cases of the fever and ague, but the town has generally been very healthy. There have been two individuals in this town who have lived to be upwards of 100 years old, and two others who have lived to be above 90.

Winooski village is situated at Winooski lower falls, being partly in this town and partly in Burlington, and $1\frac{1}{2}$ miles from Burlington village. The water power here is sufficient for almost any amount of machinery. The village has suffered very severely by fire. On the 21st of Dec. 1838, an extensive block factory, a large satinete factory, a paper mill, and saw mill were consumed in one conflagration. There are at present in this village, on the Colchester side of the river, a handsome meeting house, two stores, two taverns, a saw mill, machine shop, sash factory, and an extensive woollen factory for the manufacture of broad cloths. A substantial covered bridge connects the two parts of the village. The town is divided into 9 school districts. *Statistics of 1840.*—Horses, 229; cattle, 1,667; sheep, 5,053; swine, 1,169; wheat, bu. 1,903; barley,

306; oats, 9,856; rye, 5,973; b'k wheat, 1,202; Ind. corn, 10,343; potatoes, 36,324; hay, tons, 3,401; sugar, lbs. 1,900; wool, 11,375. Population, 1739.

CONCORD, a post town in the southern extremity of Essex county, situated in lat. $44^{\circ} 25'$ and long. $5^{\circ} 8'$, containing about 47 square miles. It is bounded northwesterly by Kirby and Bradleyvale, northeasterly by Lunenburg, southeasterly by Connecticut river, and southwesterly by Waterford, lying opposite to Littleton, in New Hampshire. It was granted Nov. 7, 1780, and chartered September 15, 1781, to Reuben Jones and his associates. The first settlement of Concord was commenced in 1788, by Joseph Ball. Among the settlers, who came into town previous to the year 1794, may be mentioned Amos Underwood, Solomon Babcock, Daniel Gregory, Benjamin Streeter, Jonathan and Jesse Woodbury and Levi Ball. In 1795, when John Fry came into town, there were 17 families here. The first settlers were principally from Westboro' and Royalston, Mass. John, son of Joseph Ball, was born in 1789, and was the first child born in town. The first town meeting was held and the town organized March 3, 1794. Elijah Spafford was first town clerk. At this meeting 14 persons took the freeman's oath. There are a Congregational, a Freewill Baptist and a Methodist church, in this town. The Congregational church was organized January 7, 1807, and then consisted of 17 members. The Rev. Samuel Godard was ordained over it Sept. 7, 1809, and dismissed June 6, 1821. The Rev. Samuel R. Hall was ordained March 4, 1823, and continued till August, 1830. The Rev. Solon Martin was ordained June 7, 1835, and dismissed Oct. 1, 1838. The Freewill Baptist church was formed Oct. 10, 1821, and the Methodist church in May, 1822. Concord academy was incorporated here November, 1823, and was for 6 or 7 years, while under the charge of the Rev. S. R. Hall, a very flourishing institution. *Hall's pond*, lying near the centre of the town, is about a mile long and on an average 100 rods wide. *Miles' pond* is about the same size, and lies near the northeast corner of the town. This town is watered by Moose river, which passes through the northwest part, by Connecticut river, on the south, and by several small streams. The surface of the town is uneven, and in the northeastern parts, very stoney. It is an excellent grazing township, and has some good tillage land. The town contains two stores, a meeting house and several mills. *Statistics of 1840.*—Horses, 329; cattle,

CONNECTICUT RIVER.

CORINTH.

1,837; sheep, 3,380; swine, 812; wheat, bu. 3,579; barley, 308; oats, 13,150; rye, 469; b'k wheat, 614; Ind. corn, 1,906; potatoes, 48,885; hay, tons, 3,609; sugar, lbs. 19,090; wool, 6,218. Pop. 1024.

CONNECTICUT RIVER lies between Vermont and New Hampshire, and belongs wholly to the latter.* Its name is from the Indian words *Quonnec* or *Unnec*, signifying long, and *Tucque* or *Tuck*, signifying river. When the Indians spoke of any thing happening at this river they used the expression *Quonnec tucquok*, or *Unnectuckok*, meaning at the long river; and hence comes *Connecticut*. This river originates among the mountains in the north part of New Hampshire, and, for some distance, forms the boundary between that state and Canada. After running between New Hampshire and Vermont, it passes through Massachusetts and Connecticut, and falls into Long Island Sound. The breadth of this river, when it first washes Vermont, is about 150 feet, and, in the course of 60 miles, increases to 390 feet. In Massachusetts and Connecticut its breadth may be estimated from 450 to 1050 feet. The depth of the river, below the head of boat navigation, may be stated to vary from five to twelve feet. This river is navigable for vessels drawing ten feet of water, 36 miles, to Middletown; for small sloops, 50 miles to Hartford; and by means of canals and other improvements, it has been rendered passable for boats to the Fifteen Mile Falls, 250 miles further. There are, in this river, many rapids. The most considerable are Bellows' Falls, between Rockingham and Walpole, N. H., (*see Rockingham*), Otta Quechee Falls, just below the mouth of Otta Quechee river, White River Falls, just above the mouth of White river, and the Fifteen Mile Falls, which extend from Barnet to Lunenburg. The perpendicular height of the falls, which have been made passable by dams and locks, between Springfield, Mass. and Hanover, N. H. a distance

of 130 miles, is about 200 feet.* There are in the river, several bars of sand, over which boats pass with difficulty in low water. At such times a bar between Deerfield and Montague, Mass., renders the river fordable. Connecticut river receives from Vermont, beginning at the north, Nulhegan, Passumpsic, Wells, Wait's, Ompomponosuc, White, Otta Quechee, Black, William's, Saxton's and West rivers; and from New Hampshire, Upper and Lower Amonosuc, Israel's, John's, Mascomy, Sugar, Cold, and Ashuelot rivers. Between Vermont and New Hampshire this river is crossed by about 20 bridges.† The flats, along the river, are, in some places, low and extensive; in others, the banks are high and rocky. The intervalles are not surpassed in fertility and beauty by any in the United States. In spring, the river usually overflows its banks through a distance of 300 miles. The scenery, along this *Nile of New England*, is variegated by a succession of neat and pleasant villages, and is charming beyond description.

CORINTH, a post town six miles square in the central part of Orange county, is in lat. 44° 2' and long. 4° 42', and is bounded northerly by Topsham, easterly by Bradford, southerly by Vershire and westerly by Washington. It lies 21 miles southeast from Montpelier, 12 westerly from Haverhill, N. H. and 41 north from Windsor. It was chartered by New Hampshire, Feb. 4, 1764, to Messrs. Ward, Taplin, and others. A confirmation grant was, afterwards procured from New York, by Henry Moore and others. In the spring of 1777, previous to the settlement of the town, Ezekiel Colby, John Nutting and John Armand, spent several weeks here in manufacturing maple sugar. They started together from Newbury, with each a five pail kettle on his head, and with this load they travelled, by a pocket compass, 12 miles through the wilderness to the place of destination near the centre of the township. This year, Mr. Colby moved his family into Corinth, which was the first family in town. The next year, 1778, Mr. Nutting moved his family here, and Mrs. Colby was delivered of a son, Henry, the first child born in town. In 1779, Messrs. Edmund Brown, Samuel Norris, Jacob Fowler and Bracket Towle, moved their families here, and the same

* Preparatory to granting the townships along Connecticut river, Joseph Blanchard, under a commission from the governor of New Hampshire, in March, 1760, made a survey of that river upon the ice, from Charlestown, N. H. to the lower Coos, and the next year the survey was continued by Hughbartes Neel, to the upper Coos. In this survey monuments were placed upon the banks of the river, once in the distance of 6 miles in a right line, to mark the corners of the river towns, which were to be surveyed afterwards. A plan of this survey was kept in the land office at Portsmouth, and from it the courses and distances were taken by Gov. Wentworth, in making out the charters of townships along the river. These facts, together with a full account of the surveys, and the troubles arising from conflicting claims, and which we are obliged for the want of room to omit, were furnished by J. McDuffie, Esq.

* The total fall of Connecticut river, from lake Connecticut to the head of McIndoes falls is Barnet, 92 1-2 miles, is 1140 feet; and from the latter place to tide water, at Hartford, Conn. the fall is 449 feet.

† The first bridge over the Connecticut was built in 1725, at Bellows' Falls, by Col. Enoch Hale. The second was built at Windsor, and completed in Oct. 1796.—Graham.

CORINTH.

COOS.

CORNWALL.

year, Mr. John Aiken, of Wentworth, N. H., erected the first grist mill, which went into operation the year following. Previous to this, the settlers had to go to Newbury, 12 miles, for their grinding. In 1780, several other families came in, and the town was organized. George Bondfield was first town clerk, David McKeen first constable, and Nehemiah Lovewell first representative. Some time, this year, Lieut. Elliot was stationed here with 20 men to defend the inhabitants against the Indians and Tories, and built a small fort. In 1781, Col. Wait and Major Kingsbury, with two companies of soldiers, under Captains Sealy and Nelson, built a fort near the centre of the town, on what is called Cook's hill, and made this their head quarters. October 16, of this year, five men, from this fort, viz: Moses Warner, John Barret, John Sargeant, Jonathan Luce and Daniel Hovey, being on a scout, and proceeding down Winooski river, were fired upon in the township of Jericho by a party of 16 Tories. Warner, Sargeant and Barret were wounded, the latter mortally. He lived about 40 hours and was buried near the margin of Winooski river in Colchester. The others were carried to Quebec, and kept till the next spring when they were suffered to return. In 1782, a British scouting party from Canada, about 20 in number, under Major Breakenridge, after annoying the settlers of Newbury, killing one man and taking another prisoner, proceeded to Corinth, where they compelled the settlers to take the oath of allegiance to the British king. The religious denominations are Baptists, Congregationalists, Methodists, Freewill Baptists and Universalists. There are two Freewill Baptist churches; that in the northwest part was organized in 1805, and that in the south in 1807. The Congregational church was organized Oct. 10, 1820. Jan. 25, 1821, they settled the Rev. Calvin Y. Chase, who died here in 1831. The Rev. Stilman Morgan, was settled in 1832, and continued till 1836. In 1838 the Rev. Solon Martin, their present minister, was settled. The Congregational meeting house was built in 1800, as was that of the Freewill Baptists, in the northwest part of the town. The Freewill Baptist house in the south part, was built in 1837. The Methodist house in the west part, was built in 1838, and that in the east in 1840. In 1804, the canker and dysentery were fatal here to a great number of persons, mostly children, and many families lost from one to three of their number. Mrs. Jane Brown, a native of Ireland, and relict of Mr. S. Brown,

died here, March 26, 1824, aged 101 years and seven months. The surface of this township is generally very uneven and broken, and the elevations abrupt, yet the land is, in almost every part, susceptible of cultivation. The soil consists of a dark loam, mixed with a small portion of sand, is easily cultivated and is very productive. The land was originally timbered with hard wood except on the streams, where there was a mixture of hemlock, spruce and fir. There is nothing peculiar in its mineralogy. Small but handsome specimens of feldspar, garnet, serpentine, hornblend, mica and rock crystal have been found. The rocks are principally granite and mica slate. This township is well watered by Wait's river, which runs through the northeast part, and by several of its branches. On North branch, from Topsham, in the northeast corner of the town, is *East village*, containing 2 meeting houses, 2 stores, a post office, grist mill, &c. Another branch rises in Washington, passes through the south part of this town, and unites with Wait's river in the western part of Bradford. There are some other streams on which mills and other machinery are erected. There are in town 5 meeting houses, 21 school districts, 5 stores, &c. *Statistics of 1840.*—Horses, 536; cattle, 3,401; sheep, 11,886; swine, 1,673; wheat, bu. 6,745; barley, 285; oats, 21,879; rye, 313; buck wheat, 1,096; Ind. corn, 10,506; potatoes, 71,845; hay, tons, 6,240; sugar, lbs, 33,585; wool, 20,343. Population, 1,970.

Coos, an Indian word, signifying at the pines. This name was applied by the Indians to two sections of Connecticut river, one below, and the other above the 15 mile falls. See part second, page 205.

CORNWALL, a township in the central part of Addison county, is in lat. 43° 57' and long. 3° 50', and is bounded north by Weybridge, east by Middlebury and Salisbury, south by Whiting and west by Bridport and Shoreham. It was chartered November 3, 1761, to Elias Read and his associates. It is 75 miles north of Bennington, and 36 south of Burlington. The settlement was commenced in 1774, by Asa Blodget, Eldad Andrus, Aaron Scott, Nathan Foot, William Douglass, James Bentley, James Bentley, junior, Ebenezer Stebbins, Thomas Bentley, Samuel Blodget and Joseph Troup. When Ticonderoga was abandoned to the British in 1777 the settlers all fled to the south, and did not return till after the war. In the winter of 1784, about 30 families came into the township from Connecticut. The town was organized in March of this

COVENTRY.

COVENTRY GORE.

CRAFTSBURY.

year, and Joel Linsley was the first town clerk, and Hiland Hall the first representative. The Congregational church, in this town, was organized July 15, 1785, and September 26, 1787, they settled the Rev. Thomas Tolman, who was dismissed November 11, 1790. The Rev. Benjamin Wooster was ordained over this church February 23, 1797, and dismissed January 7, 1802. The Rev. Jedediah Bushnell was installed May 25, 1803, and this year, their meetinghouse was erected. He was dismissed May 25, 1836, and was succeeded by the Rev. Lamson Miner, who was settled January 3, 1837, who has since been succeeded by the Rev. Jacob Scales the present pastor. This church consists of about 350 members. In 1841, a Free church was organized from the Congregational and Baptist churches, which is under the care of the Rev. Wm. B. Ransom. There is a Methodist church in the west part of the town who have a neat chapel. There is a literary debating society which was incorporated in 1832. It has a good hall for its weekly meetings and a choice library of about 450 volumes. Elder Henry Green was settled over the Baptist church and society, in 1809, and dismissed February 28, 1824. The Baptist meeting house was erected in 1807. One person has died, in this town, aged 106 years, and several have lived to be upwards of 90. This is a very handsome township of land, and the surface is generally level. Lemonfair river crosses the northwest corner, and Otter creek washes a part of the eastern boundary. This township, by charter, comprehended that part of Middlebury, which lies west of Otter creek, including the mill privileges on the west side of the creek at Middlebury falls. In the south part of the town is a quarry of excellent dark blue lime stone from which the material for the front of the new college in Middlebury was obtained, and near the centre of the town is a bed of hydraulic cement, or water lime. Calcareous spar, in very beautiful, transparent, rhomboidal crystals, is found in the western part of this township. Along Otter creek, in the southeast part, is a large swamp covering several thousand acres. There are here 2 saw mills, 3 stores, 1 tavern, 2 tanneries and 1 marble shop. *Statistics of 1840.*—Horses, 318; cattle, 3,059; sheep, 24,561; swine, 824; wheat, bus. 2,436; oats, 9,021; rye, 874; buck wheat, 690; Indian corn, 7,288; potatoes, 24,307; hay, tons, 8,751; sugar, lbs. 11,000; wool 60,897. Population 1163.

COVENTRY, name altered to Orleans, November, 1841. See Orleans.

COVENTRY GORE, a tract of 2000 acres of land belonging to Coventry, (now Orleans,) lying in Orleans county, a few miles to the southwest of that town. It is bounded north by Newport, east by Irasburgh, south by Lowell and west by Troy, and contains 10 inhabitants.

CRAFTSBURY, a post town in Orleans county, lat. 44° 39' and long. 4° 32', six miles square, and is bounded on the north by Albany, east by Greensborough, south by Wolcott, and west by Eden. It is situated twenty-five miles south from Canada line, and about the same distance northerly from Montpelier, and is nearly at equal distances from Connecticut river on the east, and lake Champlain on the west. It was granted Nov. 6, 1780, to Timothy Newell, Ebenezer Crafts, and their associates, and chartered by the name of Minden, Aug. 23, 1781. The first settlement in the town was commenced in the summer of 1788, by Col. Ebenezer Crafts, who during that summer opened a road from Cabot, eighteen miles, cleared ten or twelve acres of land, built a house and saw mill, and made considerable preparation for a grist mill. In the spring of 1789, Nathan Cutler and Robert Trumbell moved their families into this township. In the ensuing fall Mr. Trumbell, by reason of the sickness of his family, spent the ensuing winter in Barnet, but Mr. Cutler's family remained through the winter. Their nearest neighbors were Ashbel Shepard's family, in Greensborough, distant six miles; there were at that time no other settlements within the present bounds of Orleans county. In Nov. 1790 the name of the town was altered to Craftsbury. In Feb. 1791, Col. Crafts, having previously erected a grist mill, and made considerable additions to his improvements, together with John Corey, Benjamin Jennings, Daniel Mason, John Babcock, and Mills Merrifield, removed their families from Sturbridge, Mass. After arriving at Cabot they found it impossible to proceed any further with their teams, on account of the great depth of the snow, being about four feet deep. They were obliged to provide themselves with snow-shoes, and to draw the female part of their families on hand sleds, a distance of eighteen miles. These settlers were soon after followed by several other families from Sturbridge and other towns in Worcester county. In March, 1792, the town was organized, and Samuel C. Crafts was the first town clerk, and was annually chosen to that office until March, 1829, when Joseph Scott, (then jun.) was elected, and continues to hold said office. The

CRAFTSBURY.

CRAFTSBURY.

town was first represented in the general assembly by Ebenezer Crafts, in 1792. In 1797, a Congregational church was organized, and the Rev. Samuel Collins was installed, and continued to preach in this town until 1804, when he died. From 1804 to 1822 the town was without a settled minister, in which last mentioned year the Rev. William A. Chapin was ordained pastor of the Congregational society; which office he held for about twelve years, and then took a dismission. The Rev. Samuel R. Hall is at present pastor of the Congregational church and society, he was installed into that office in 1841. There has for many years past been a very considerable society of Methodists in Craftsbury, the Rev. Joseph C. Aspenwall has at present the charge of the society. There is also a society of Reformed Presbyterians, or Covenanters, over which the Rev. Samuel Wilson has been ordained. There are some Baptists, and several Universalists, which are only occasionally supplied with preaching.—The professional men, besides the above named, are James A. Paddock and Nathan S. Hill, attorneys, Daniel Dustin, Ephraim Brewster and Daniel Bates, physicians. This township is well watered by Black river which is formed here, and by its several branches, which afford numerous mill privileges. Black river was known to the natives, who occasionally resided in this part of Vermont, by the name of *Elligo-sigo*. Its current is in general slow, the whole descent from Elligo pond to Memphremagog lake, including the falls at Irasburgh and Coventry, being by actual survey only 190 feet. Wild branch a tributary of Lamoille, rises in Eden and passes through the western part of this township. There are five natural ponds, viz: Elligo, (see Elligo,) lying partly in Greensborough, Great Hosmer, lying partly in Albany, Little Hosmer, and two smaller ponds. The geology of this town is in many respects interesting, and, in some, peculiar. Few areas of the same space, in a region of primary rocks, furnish so many varieties *in situ*. In the eastern borders, granite appears, then gneiss, then mica slate; and these in the central portions are displaced by argillaceous slate of a very dark or plumbago color, alternating with silicious lime stone. The rocks on the west side of Black river are hardly more uniform; strata of mica slate, argillaceous and chlorite slates, and limestone, give place to each other in rapid succession. Near the south village is an extensive body of gray granite, very much broken on the surface. This rock is filled with nodules of black mica and

quartz, in concentric lamina. These are about the size of butternuts, and, in many of the specimens, are so numerous that a hundred may be counted within a circle of two feet in diameter. In some parts of the ledge these nodules are very much flattened, as if subjected to an immense vertical pressure when the mass was in a semi-fluid state. A rock similar to this, it is believed, has not been found in any other place in this country or Europe. Near the centre of the township, on an elevated plain, affording an extensive prospect, is situated the centre village, containing over thirty dwelling houses, two meeting houses, a town house, an academy, school house, two taverns, two dry goods and one hardware store, two cabinet makers', two saddlers', two blacksmith's, one tin maker's, and one hatter's shop, and one tannery. This village is principally situated round an open square, forty rods north and south, by twenty-four rods east and west. Craftsbury academy is located here; was incorporated in October, 1829, and has the avails of one half of the grammar school lands in Orleans county, being about two thousand six hundred acres, about half of which is leased. The building is of brick, two stories high, and is pleasantly situated on the west side of the common. It is the object of the trustees and instructors to render it a place of thorough education to those who resort to it. The institution embraces three departments. The *classical*, is designed for those who are fitting for college; the *teachers*, for those who are qualifying to become instructors; and the *general*, for those who wish to qualify themselves for business in the various pursuits of life. The apparatus is extensive, including a galvanic battery, electro magnetic apparatus, air pump, electrical machine, telescope, double and single microscopes, globes, chemical apparatus, &c., together with a very extensive cabinet of minerals, shells and marine productions; and a museum of curiosities in other departments of natural history and the arts. The collection of ancient coins contains specimens from the Catacombs of Egypt and Herculaneum, besides numerous other interesting varieties. The institution is under the superintendence of the Rev. S. R. Hall. There is another village situated on Trout brook, a large branch of Black river, a mile and a half from the centre village, containing about twenty dwelling houses, two saw mills, an oil mill, a fulling mill, a carding machine, a carriage maker, a blacksmith and a chairmaker's shop, one store and a tavern. There are three

CUMBERLAND COUNTY.

DANBY.

DANVILLE.

meeting houses in the town, two in the centre village, and one in the easterly part. There are twelve school districts, and ten school houses. There are also within the limits of the township, two grist mills, one hulling mill, one oil mill, ten saw mills, two fulling mills, two carding machines, and three carriage maker's shops. *Statistics of 1840.*—Horses, 333; cattle, 1,718; sheep, 3,166; swine, 658; wheat, bu. 1,730; barley, 1,049; oats, 14,398; rye, 167; buck wheat, 830; In. corn, 1,928; potatoes, 47,906; hay, tons, 3,171; sugar, lbs. 35,412; wool, 7,980. Population, 1,151.

CUMBERLAND COUNTY.—This county was erected by an act of the legislature of New York, passed July 3, 1766. This act was annulled by the crown June 26, 1767, and repassed by New York Feb. 20, 1768, and chartered on the 17th of March following. By the charter, this county was bounded as follows; beginning in Massachusetts north line on the west bank of Connecticut river and running W. 10° N. about 26 miles to the southeast corner of Stamford; thence N. 13° E. 56 miles to the south east corner of Socialborough; thence N. 53° E., 30 miles to the south corner of Tunbridge; thence along the south line of Tunbridge, Strafford and Thetford to Connecticut river and down said river to the place of beginning. The county seat was first at Chester and afterwards at Westminster. The original charter of this county, elegantly written on parchment, was presented to the University of Vermont in 1840, by Udney H. Peninan, Esq. of Colchester and is preserved in the library of the University. After the organization of the state government this county retained the name till Feb. 11, 1779 when it was changed to Windham.

DANBY, a post town in the south part of Rutland county, is in lat. 43° 21' and long. 4° 1', and is bounded north by Tinmouth, east by Mount Tabor, south by Dorset and west by Pawlet. It is 34 miles north from Bennington, and 18 south from Rutland. It was chartered August 27, 1761, and contains about 39 square miles. The settlement of this township was commenced in 1765, by Joseph Soper, Joseph Earl, Crispin Bull, Luther Calvin, and Micah Vail. The town was organized March 14, 1769, and Thomas Rowley was first town clerk and first representative. There is here a society of Friends or Quakers, who have a meeting house in the east part of the town, and another called Orthodox Friends, or separatists, who have one in the north part. There is also a society of Methodists, one of Baptists, and one of

Universalists, who own jointly 3 meeting houses, one at the centre, one in the south part and one in the east. Otter creek runs nearly on the line between this township and Mount Tabor, but there are no streams of much consequence within the township. The most considerable are, Mill river which rises in the southwestern part, and falls into Otter creek in Mount Tabor, and Flower branch which rises in the northwest part, and falls into Pawlet river in Pawlet. These and a branch of Otter creek, in the northeastern part, are all sufficient for mills. The surface of the township is uneven, and some parts of it mountainous. South mountain and Spruce mountain are the principal elevations. The soil is well adapted to the production of grass, and there are here some of the largest dairies in the state. No less than 300,000 lbs. of cheese, and butter in proportion, have been carried from this town to market in one year. There are several caverns in this township, which are considerable curiosities, but they have never been thoroughly explored. One of them, in the southeastern part, descends like a well into the solid rock. It is said that a person was let down by a rope 150 feet perpendicularly into this cavern without discovering any bottom. Specimens of galena, or sulphuret of lead, have been found here. In the western part of the township is a spring, which is nearly sufficient to carry a mill, where it issues from the foot of the mountain. There are several marble quarries in the south east part, and in the east village are three mills for sawing marble. The town is divided into 13 school districts. There are two grist mills, five saw mills, five stores, two taverns, two tanneries, and one trip hammer. *Statistics of 1840.*—Horses, 35; cattle, 3,366; sheep, 8,950; swine, 629; wheat, bu. 2,217; barley, 65; oats, 6,094; rye, 110; wheat, b. 256; In. corn, 4,267; potatoes, 47,563; hay, tons, 5,378; sugar, lbs. 35,715; wool, 25,433. Population, 1379.

DANVILLE, a post town and the shire town of Caledonia county, is in lat. 44° 26' and long. 4° 51', and is bounded north by Wheelock, northeast by St. Johnsbury, southeast by Barnet, south by Peacham, and west by Walden, Goshen Gore, and a part of Cabot. It is 28 miles east northeast from Montpelier. This township was granted October 27, 1786, and chartered to Jacob Bailey, Jesse Leavenworth and others, October 31, 1786. Some difficulty having arisen respecting the lands, the proprietors took out a new, or quieting charter. October 29, 1792, Wal-

DANVILLE.

DEERFIELD RIVER.

DERBY.

den gore was annexed to this township, and since that time, one half of Deweysburgh, the other half being annexed to Peacham, so that it now contains about 50 square miles. Sargeant Morrill commenced chopping in this town in 1784. In 1785, or '6, the settlement was commenced by about 50 emigrants from New Hampshire and Massachusetts, who entered on the lands as "squatters." In October, 1786, the legislature granted the township, as above stated, reserving to the settlers the lands on which they had located, not exceeding 320 acres each. In the following winter 40 families more joined the settlement, and for two or three years the settlement was so rapid that, in 1789, the number of families was estimated to be 200. The consequence of such an influx, was an extreme scarcity, and much suffering for the want of provisions. The first mills in this town were a saw and grist mill, erected in 1787, by David Whitcher. The same year, March 20, the town was organized. Abraham Morrill was the first town clerk and the first representative. In 1790, improvements had been commenced on nearly all the lots in town. The religious societies are Methodists, Congregationalists and Baptists, each of which has a commodious house of worship, situated in the village. The Congregational church was organized August 9, 1792, and has had the services of the following ministers. The Rev. John Fitch, from October 30, 1793, to October 1, 1816; Rev. Jeremiah Flint, from July 31, 1817, to March, 1818; Rev. Edward Hollister, from March 26, 1823, to May 7, 1826; Rev. E. J. Boardman, from January 3, 1827, to October 29, 1833; and Rev. David A. Jones, from March 25, 1835, to April, 1839. The Rev. R. C. Hand is the present minister of this church. The eastern part of this township is elevated about 200 and the western about 800 feet above Connecticut river. The soil is free from stone, is easily cultivated, and is perhaps equal, in richness and adaptation to agriculture, to any in the state. It is watered by numerous streams of pure water, which arise in the higher lands of Wheelock, Walden and Cabot. Joe's pond lies mostly in the western part of the township and covers about 1000 acres. It discharges its waters into the Passumpsic by Merritt's river, or Joe's brook. At its outlet a large never failing sheet of water falls over a limestone ledge, 75 feet in 12 rods. Here are grist, saw, clapboard and shingle mills. Below these, on this stream, are here, two woollen factories, two grist mills, and several saw mills. In the

north part of the town are Sleeper's river and the Branch, on which are 5 grist and saw mills. Large quantities of butter, pork and wool, are here produced for market. *Danville village* is very pleasantly situated nearly in the centre of the township, on elevated land and in the midst of a beautiful farming country, and contains 600 inhabitants. The public buildings are, a Congregational, a Methodist and a Baptist meeting house, a court house and jail, and an academy, all in a neat and modest style. The village encloses an open square of several acres. The academy was incorporated in 1840, and named Philips academy, in honor of Paul D. Philips, who endowed it with \$4,000. The building was erected by the inhabitants and cost \$4,000. A weekly paper, called the "*North Star*," has been published in this village by Ebenezer Eaton, for 35 years. *Statistics of 1840.*—Horses, 722; cattle, 3,403; sheep, 14,982; swine, 2,264; wheat, bu. 6,355; barley, 1,304; oats, 41,198; rye, 27; Ind. corn, 5,883; potatoes, 160,062; hay, tons, 8,311; sugar, lbs. 62,467; wool, 26,834. Pop. 2633.

DEERFIELD RIVER, rises in the north part of Stratton, and runs south through Somerset into Searsburgh, thence southeast into Wilmington, thence southwesterly through the corner of Whitingham, and leaves the state after running three or four miles on the line between Whitingham and Readsborough. After entering Massachusetts, it takes a southeasterly course and falls into Connecticut river, between Greenfield and Deerfield, about 18 miles below the south line of Vermont. It runs about 28 miles in Vermont, and waters about 320 square miles. Its whole length is about 50 miles.

DERBY, a post town in the northeast part of Orleans county, is in lat. 44° 58' and long. 4° 50', and is bounded north by Stanstead, in Canada, east by Holland, south by Salem, and west by Memphremagog lake which separates it from Newport. It extends 7½ miles on Canada line, and 5 miles and 7 chains on Holland line, and is 52 miles northeasterly from Montpelier. It was chartered to Timothy Andrus and his associates, Oct. 29, 1779, containing 23,040 acres. The first settlement was made here in 1795, by Alexander Mogoon, Henry Burrell, and the Hon. Timothy Hinman. Much praise is due to the latter for his persevering industry in making roads and furnishing other facilities for the settlement of the country, but no peculiar circumstances are known to have attended it. Emigrants from Connecticut and other places soon made it a flourishing town. It was

DERBY.

DEWEYSBURGH.—DOG RIVER.

DORSET.

organized March 29, 1798, and Timothy Hinman was first town clerk. For some years this place was visited by hunting parties of the St. Francis Indians, who formerly claimed all the north part of this state, and with whom some trade in peltries was carried on. In 1808, Elder Samuel Smith was settled over the Baptist church and society in this town, and he died in 1810. The Rev. Luther Leland was settled over the Congregational church in 1810, and died in November, 1822. A meeting house 44 by 54 feet, was completed in 1820, on a small eminence, near the centre of the town. Since that time, houses of worship have been erected by the Baptists, Methodists and Episcopalians. The Episcopal church was organized at *Derby Line*, July 25, 1840, by the name of *St. John's Church*, and their beautiful new church was consecrated the next day. This church stands within a few rods of Canada line, and the congregation is collected from the village and country on both sides. This parish has grown up under the ministry of the Rev. N. W. Camp, who still continues his labors here. A literary institution has recently been established at Derby, under the patronage of the Baptists, denominated the *Derby Literary Institute*. It has a male and female department, which are respectively under the charge of Mr. Alvah Hovey and Miss E. Ayres. The surface of this township is very level, more so than any other in the county. There are some plains of several hundred acres extent; and, where the land rises, the elevations are gradual and moderate and hardly deserve the name of hills. The land is well timbered, principally with rock maple and other hard wood, except in the vicinity of the lake, where, in a state of nature, large tracts were covered with white and Norway pine, intermixed with some red oak, spruce, hemlock, fir, cedar, &c. Cedar swamps of from one to ten acres are found in various parts. The soil is fertile and abundantly productive. The river Clyde passes through the south part of the township in a northwesterly direction, affording numerous mill seats. Salem pond through which Clyde river passes, lies partly in this town and is four miles long and three broad. Hinman's pond, near the centre of the town, is $1\frac{1}{2}$ miles long and $\frac{3}{4}$ broad, and empties into Salem pond. The town contains eleven school districts, 5 stores, eight saw, and 2 grist mills, 1 shingle mill, 1 wollen factory, &c. *Statistics of 1840.*—Horses, 496; cattle, 2,193; sheep, 5,639; swine, 1,583; wheat, bu. 5,176; barley, 1,439;

oats, 28,263; rye, 270; b'k wheat, 2,108; Ind. corn, 3,080; potatoes, 93,006; hay, tons, 3,896; sugar, lbs. 47,633; wool, 10,446. Population, 1681.

DEWEYSBURGH, was a tract of 5310 acres, lying between Danville and Peacham, chartered to Elijah Dewey and associates, February 28, 1782. It was organized as a town, but in November 1810, was divided by act of Legislature, and one half of it annexed to Danville and the other half to Peacham.

DOG RIVER, is formed in Northfield, by the union of several streams from Roxbury, Brookfield, &c. and taking a northerly course through Berlin, falls into Winooski river, three quarters of a mile below the village of Montpelier. Its length is about 16 miles, and it waters about 80 square miles.

DORSET, a post town in the north part of Bennington county, is in lat. $43^{\circ} 15'$ and long. $4^{\circ} 1'$, and is bounded north by Danby, east by Peru, south by Manchester and west by Rupert. It was chartered Aug. 20, 1761, and contains about 41 square miles. The first settlement was made in 1768, by Felix Powell, from Massachusetts, Isaac Lacy, from Connecticut, and Benj. Baldwin, Abraham Underhill, John Manley, and Geo. Gage, from New York. The town was organized in 1769, when Asa Baldwin was chosen town clerk. Cephas Kent was the first representative. In 1781, the Rev. Elijah Sill was settled over the Congregational church and society here, but the time of his dismission is not known. In Sept. 1796, the Rev. William Jackson was settled over this church. The first minister of the Baptist society was Elder Cyrenus M. Fuller, settled in 1818. The epidemic of 1813 was very mortal. About 40 were victims to it. There are no considerable streams in this township. Otter creek heads in Mount Tabor, runs southwesterly two or three miles, into Peru, then west three fourths of a mile into this township, when it takes a northerly direction through a considerable natural pond, and leaves the township near the northeast corner. The Battenkill heads in this township, on the flat about 25 rods south of the bend in Otter creek, and runs off to the south. Another branch of this stream rises in the southwestern part, and unites with it in Manchester. Pawlet river, rises in the northwestern part, and passes off into Rupert. These streams afford a number of mill privileges. This township is considerably mountainous. Dorset mountain lies in the north part, and extends into Danby, where it is called South

DOVER.

DUMMERSTON.—DUNDER ROCK.

DUNMORE LAKE.

mountain. Equinox mountain lies partly in the southwest corner. In this township are several remarkable caverns. One in the south part, is entered by an aperture nearly 10 feet square, "which opens into a spacious room nine rods in length and four wide. At the further end of this apartment are two openings, which are about 30 feet apart. The one on the right is three feet from the floor, and is about 20 inches by six feet in length. It leads to an apartment 20 feet long, 12 wide and 12 high. From this room there is an opening sufficient to admit a man to pass through sideways about 20 feet, when it opens into a large hall 80 feet long and 30 wide. The other aperture from the first room is about as large as a common door, and leads to an apartment 12 feet square, out of which is a passage to another considerable room, in which is a spring of water. This cavern is said to have been explored 40 or 50 rods without arriving at the end." Considerable quantities of marble are wrought here. The town contains three meeting houses, four stores, one grist and eight saw mills. *Statistics of 1840.* Horses, 253; cattle, 1,723; sheep, 7,802; swine, 590; wheat, bus. 1,321; oats, 7,830; rye, 906; buckwheat, 1,013; Indian corn, 5,595; potatoes, 31,018; hay, tons, 4,080; sugar, lbs. 17,560; wool, 18,030. Population, 1432.

DOVER, a township in the central part of Windham county, is in lat. 42° 58' and long. 4° 13', and is bounded north by Wardsborough, east by Newfane, south by Wilmington and a part of Marlborough, and west by Somerset. It was granted November 7, 1780, as a part of Wardsborough. October 18, 1788, Wardsborough was divided into two districts, called the north and south district. In 1810, the south district was constituted a separate town by the name of Dover. Dover is 13 miles northwest from Brattleborough, and 18 northeast from Bennington. For an account of the settlement of this township, see *Wardsborough*. There are no considerable streams in this township. Several branches of West river and a branch of Deerfield river rise here, and afford several mill privileges. Serpentine, and chlorite slate, are found in this township; and there are here two grist and four saw mills. *Statistics of 1840.* Horses, 123; cattle, 1,849; sheep, 1,893; swine, 760; wheat, bus. 1,194; barley, 274; oats, 4,106; rye, 477; buckwheat, 85; Indian corn, 17,715; potatoes, 35,986; hay, tons, 3,140; sugar, lbs. 22,678; wool, 4,104. Population, 729.

DRAPER. See *Wilmington*.

DUMMERSTON, a post township in the

eastern part of Windham county, is in lat. 42° 56' and long. 4° 28', and is bounded north by Putney and Brookline, east by Connecticut river, which separates it from Westmoreland, N. H., south by Brattleborough, and west by a part of Marlborough and Newfane. It is 92 miles south from Montpelier, and 31 east from Bennington, and was chartered December 26, 1753. This was one of the first settled townships in the state, but we have not been able to obtain a particular account of the circumstances attending its settlement and subsequent history. It contained, in 1791, upwards of 1500 inhabitants. A Congregational church was early formed here, over which the Rev. Thomas Farrar was settled Aug. 24, 1779, who continued here about 4 years. The Rev. Aaron Crosby was settled in 1784, and continued 20 years. The Rev. Hosea Beckley was settled March 2, 1808, and continued till Oct. 15, 1837. The Rev. Nelson Barber, the present minister, was installed May 20, 1840. Of the other denominations we have no particulars. This township is watered by West river, which enters it from Newfane, and passes through it in a southeasterly direction into Brattleborough, and by several small streams, some of which fall into this river and others into the Connecticut, affording a considerable number of good sites for mills. The surface of the township is broken. The rocks, which constitute Black mountain, near the centre of the township, are an immense body of granite. A range of argillaceous slate passes through this township from south to north, and is considerably quarried for roof slate and grave stones. Primitive limestone occurs in beds. Specimens of tremolite, limpid quartz and galena, or the sulphuret of lead, are also found here. There are 2 stores, and 5 grist and 5 saw mills. *Statistics of 1840.* Horses, 249; cattle, 2,036; sheep, 3,447; swine, 877; wheat, bus. 907; barley, 101; oats, 11,350; rye, 1,729; buckwheat, 82; Indian corn, 8,270; potatoes, 27,950; hay, tons, 3,090; sugar, lbs. 7220; wool, 5713. Population, 1263.

DUNCANSBOROUGH. The name of this township was altered to Newport, October 30, 1816. See *Newport*.

DUNDER ROCK is situated in Lake Champlain, nearly midway between Juniper Island and Pottier's Point, and 2 m. 226 rods in a right line from the south wharf in Burlington. It is a mass of naked slate rock rising some 20 feet above the water. Origin of the name not ascertained.

DUNMORE LAKE is about four miles long and three-fourths of a mile wide. It

DUXBURY.

is situated partly in Leicester and partly in Salisbury, and discharges into Otter creek by what is called Leicester river. Trout weighing 25 pounds have been taken out of this lake. It is sometimes called Trout pond.

DURHAM, a New York grant, located on Otter creek, a little south of Rutland.

DUXBURY, a township in the western part of Washington county, is in lat. $44^{\circ} 18'$ and long. $4^{\circ} 12'$, and is bounded north by Waterbury and a part of Bolton, from which it is separated by Winooski river, east by Moretown, south by Fayston, and west by Huntington and a part of Bolton. It is 13 miles west from Montpelier, 22 southeast from Burlington, and 100 north from Bennington; and was chartered June 7, 1763. The settlement of this township was commenced about the year 1786. In 1791, there were 39 inhabitants. The south and western parts of the township are mountainous and incapable of settlement. Nearly all the inhabitants are confined to the margin of Winooski river and the northeastern parts of the township. This township is watered by Winooski river, which forms the northern boundary, by Duxbury branch, on which is a considerable settlement, and several small branches of Mad river. There are here seven saw mills. The natural bridge over Winooski river, is between this town and Waterbury, and near it are some curious caverns. *Statistics of 1840.* Horses, 122; cattle, 1,044; sheep, 2,055; swine, 565; wheat, bus. 1,293; barley, 61; oats, 4,415; rye, 319; buckwheat, 1,049; Indian corn, 2,714; potatoes, 27,910; hay, tons, 2,289; sugar, lbs. 26,374; wool, 4,837. Population, 820.

EAST HAVEN, a township in Essex county, 45 miles northeast from Montpelier, chartered October 22, 1790, to Timothy Andrus and associates, and contains 36 square miles. It is bounded northwesterly by Newark, northeasterly by Brighton and Ferdinand, southeast by Granby, and southwest by Victory and Burke. There were five or six families in this town as early as 1814, but the settlement has advanced very slow, and it is still unorganized. The land is high, but much of it very suitable for grazing. Passumpsic river crosses the west corner, and the head of Moose river waters the eastern part, each being about two rods wide, and affording good mill sites. *Statistics of 1840.* Horses, 18; cattle, 92; sheep, 192; swine, 58; wheat, bus. 99; barley, 95; oats, 460; rye, 25; buckwheat, 170; Indian corn, 69; potatoes, 3,260; hay, tons, 136; sugar, lbs. 3,330; wool, 370. Population, 79.

EAST HAVEN.

EDEN.

EDEN, a township in the northern part of Lamoille county, is in lat. $44^{\circ} 42'$ and long. $4^{\circ} 25'$, and is bounded northerly by Lowell, easterly by Craftsbury, southerly by Hydepark and Johnson, and westerly by Belvidere. It is 30 miles north from Montpelier, and 37 northeast from Burlington; was granted November 7, 1780, and chartered to "Col. Seth Warner and his associates, our worthy friends, the officers and soldiers of his regiment in the line of the continental army," August 28, 1781, containing 36 square miles. Twenty one square miles from Belvidere have since been added to it. The settlement was commenced in 1800, by Thomas H. Parker, Isaac Brown and Moses Wentworth. The town was organized March 31, 1802, and Moses Wentworth was first town clerk. It was first represented, in 1803, by Thomas H. Parker. There are three religious societies, Congregationalists, Methodists, and Universalists. The Rev. Joseph Farrar was settled over the Congregational church and society November 24, 1811, and dismissed Dec. 20, 1815. This church was organized Nov. 3, 1812, and now consists of about 40 members. The Methodist church was organized in 1818, and the Universalist in 1834. The former consists of about 40 and the latter of about 20 members. A union meeting house was erected in 1832. The streams in this township are numerous. *Wild branch* and *Green river* rise in the eastern part. The former runs through the corner of Craftsbury, and the latter through the corner of Hydepark, and both fall into the river Lamoille in Wolcott. They are both considerable mill streams. The *branch*, which is the outlet of North pond, runs across the northwest corner of Hydepark, and falls into the Lamoille in Johnson. North pond is two miles long, and of very unequal width. A tongue of land extends into it from the south three quarters of a mile, which is, in some places, no more than two rods wide, and on which grow large quantities of blue and black whortleberries. These berries are found no where else in this part of the country. The township is considerably mountainous. Mount Norris and Hadley mountain lie on the north line of the township, and partly in Lowell. Belvidere mountain lies partly in the northwest corner of the township, and its summit is probably the highest land in the county excepting, perhaps, Jay Peak. In the western part of Eden is some good tillage land. The eastern part, being the dividing ridge between the waters of lake Champlain and Memphremagog, is moist and cold, but good for grazing. No town

ELLIGO POND.

ELMORE.

ENOSBURGH.

in the vicinity furnishes, in proportion to its wealth and number of inhabitants, so many and so good beef cattle as this, for market. Rocks, principally mica and chlorite slate. There are here 10 school districts, and 7 school houses, 4 saw and one grist mill. *Statistics of 1840.* Horses, 147; cattle, 1,108; sheep, 1,974; swine, 365; wheat, bus. 1,318; barley, 75; oats, 4,614; rye, 191; buckwheat, 5; Indian corn, 828; potatoes, 38,250; hay, tons, 2,050; sugar, lbs. 18,290; wool, 3,958. Population, 702.

ELLIGO POND lies partly in Greensborough and partly in Craftsbury. It is about two miles long and half a mile wide, and has two outlets, one to the north and the other to the south. The northern outlet constitutes one of the head branches of Black river; the southern, after passing through Little Elligo Pond, communicates with the river Lamoille in Hardwick. The scenery about Elligo Pond is romantic and beautiful. The eastern bank presents abrupt, and, in some places, perpendicular rocks of considerable height, while the western rises gradually, and is covered with a luxuriant growth of forest trees, which contrast finely with the naked cliffs of the opposite shore. Near the centre of the pond are two small islands. This pond is a favorite resort for the sportsman and the admirer of nature in her own simplicity. Its waters abound with fine trout, and its banks with a plenty of game. It was formerly a favorite hunting ground of the St. Francis Indians, to whom the northern part of Vermont once belonged. These Indians called this pond *Elligo Scotton*, and hence it is now sometimes, but improperly, called *Elligo Scotland*.

ELMORE, a post town six miles square, in the southeastern part of Lamoille county, is in lat. 44° 29' and long. 4° 29', and is bounded north by Wolcott, east by Monroe, south by Worcester, and west by Morristown. It is 17 miles north from Montpelier, and 33 east from Burlington; was granted November 7, 1780, and chartered to Col. Samuel Elmore and his associates, August 21, 1781. The settlement of this township was commenced in July, 1790, by Martin and Jesse Elmore, James and Seth Olmstead, and Aaron Keeler, from Sharon and Norwalk, Connecticut. The town was organized July 23, 1792. Joseph Leech was the first town clerk, and Martin Elmore the first representative. The Congregationalists and Methodists are the most numerous denominations of christians. Fordway, or Elmore mountain, lies in the northwest part of the township, and is a

considerable elevation. The remaining part of the surface is accessible and not very uneven. It is mostly timbered with hard wood, and the soil is of a middling quality. A part of the waters of this township pass off to the north into the river Lamoille, and a part to the south into Winoski river. Mead's pond lies in the northwestern part, and covers about 300 acres. There are three other small ponds within the township. Iron ore is found here in abundance. *Statistics of 1840.*—Horses, 95; cattle, 712; sheep, 1,191; swine, 226; wheat, bu. 881; barley, 59; oats, 3,670; rye, 17; buckwheat, 190; Indian corn, 266; potatoes, 20,170; hay, tons, 1,310; sugar, lbs. 9,790; wool, 2,942. Population, 476.

ENOSBURGH, a post town in the northeastern part of Franklin county, is in lat. 44° 52' and long. 4° 15', and is bounded north by Berkshire, east by Montgomery and a part of Richford, south by Bakersfield, and west by Sheldon. It is 35 miles northeast from Burlington, and 43 northwesterly from Montpelier; was granted March 12, 1780, and chartered to Roger Enos, and associates on the 15th of May following. The settlement of this township was commenced in the spring of 1797, by Amos Fasset, Stephen House, Martin D. Follett and others, mostly emigrants from other townships in this state. The town was organized in March, 1798, and Isaac B. Farrar was chosen first town clerk. It was first represented in the fall of the same year, by William Barber. The religious societies are Congregationalists, Baptists, Episcopalians, Freewill Baptists, and Methodists. The Congregational church was formed October 11, 1811, and originally consisted of four male and six female members. In May, 1814, the Rev. James Parker, moved into the town and took charge of this church, which continued under his pastoral care till 1821. On the 3d of July, 1822, the Rev. Thomas Skelton was installed over this church and dismissed in 1826; the Rev. John Scott was settled in 1829, and dismissed in 1834; the Rev. Moses Parmelee in 1835, and died in 1838; the Rev. James T. Phelps in 1839, dismissed in 1841. The Rev. John C. Wilder, the present pastor, was installed in Oct. 1841. Members, 165. Meeting house built in 1821. There are two Baptist churches; the first consists of 50, and the other of about 100 members. The first has no settled minister; the second is under the care of the Rev. Oliver W. Babcock, settled in 1841. The Episcopal church, called *Christ's Church*, consists of 37 members, and is under the charge of the

ESSEX.

ESSEX COUNTY

Rev. Moore Bingham. Their church is of brick, built in 1839, in the west village, as was also the Methodist chapel. The Methodist society is large. There are two small Freewill Baptist societies, which are supplied by the Rev. Alanson Kilburn, and Rev. David M. Ladd. There is an academy, incorporated in 1839, and located at the centre of the town. The building is of brick, and was erected in 1839. The surface of this township is pleasantly diversified with hills and valleys; but the soil is better adapted to the production of grass than grain. It is well watered by Missisco river, which runs through the north part, by Trout river, which runs across the northeast corner, and by two considerable streams, which run through the south part. These streams afford numerous and excellent mill privileges. There are here 15 school districts, 1 woollen factory, 3 starch factories, 3 stores, 1 tavern, 4 grist and 11 saw, and 3 fulling mills, and an extensive tannery. *Statistics of 1840.*—Horses, 312; cattle, 2,101; sheep, 5,220; swine, 481; wheat, bu. 3,613; barley, 137; oats, 5,164; rye, 77; buck wheat, 757; Ind. corn, 2,928; potatoes, 78,015; hay, tons, 8,830; sugar, lbs. 41,730; wool, 11,262. Population, 2022.

Essex, a post town in the central part of Chittenden county, is in lat. 44° 31' and long. 3° 58', and is bounded north by Westford, east by Jericho, south by Williston and Burlington, from which it is separated by Winooski river, and west by Colchester. It is seven miles northeast from Burlington, and thirty-four west from Montpelier, and was chartered June 7, 1763. The first permanent settlement was made in this township, in 1783, by Messrs. Smiths, Winchels, and Willard. The first settlers were principally from Salisbury, Con. In 1789, there was a very great scarcity of provisions in this part of the country, and the settlers suffered extremely on that account. This town was organized March 22, 1786, and Elkanah Billings was the first town clerk. It was first represented by Dubartis Willard. The town was first regularly surveyed by John Johnson, Esq. in 1806. The first saw mill at Hubbell's falls was erected by John Johnson, in 1804, and the stone grist mill was built by him in 1819. The Congregational church was organized in this town about the year 1790. The Rev. Asaph Morgan was ordained over it in August, 1804, and died here a few years ago. The Rev. Daniel Warren is the present minister. The Baptist church was formed about the year 1800, and there is a considerable Metho-

dist church. Each of these denominations erected a meeting house at the centre village in 1839. A Mr. Castle died here in 1823 aged 98 years, and Mr. Knickerbacker, about 1830, aged 100 years. Mr. Abel Castle is now living here at the age of 97. The epidemic of 1812 and '13 was very mortal, and in one of those years carried off about 40 persons. There are no mountains, and but few hills in this township. The south and western parts are timbered principally with pine, the soil is dry and sandy, but produces good rye and corn. The remaining part of the township is timbered with hard wood, and is more natural to grass. Winooski river washes the southern boundary. In this river are here two falls. The lower, called Hubbell's falls, afford several valuable mill privileges. Brown's river rises in Underhill and Jericho, enters this township from the latter, and, after running across the northeast corner, and through Westford, falls into the river Lamoille in Fairfax. Indian river, called here Steven's brook, Alder brook, and Crooked brook, are considerable streams. On Winooski river are beautiful tracts of intervale. The town is divided into 13 school districts, in which are good school houses. There are here one grist mill, seven saw mills, one fulling mill, one carding machine, three stores, five taverns, and two tanneries. There are two small villages. That, at the centre, contains three meeting houses, two stores and a tavern. *Statistics of 1840.*—Horses, 365; cattle, 1,863; sheep, 5,752; swine, 1,042; wheat, bu. 2,246; barley, 20; oats, 11,775; rye, 3,302; buck wheat, 1,228; In. corn, 7,934; potatoes, 43,323; hay, tons, 4,532; sugar, lbs. 10,955; wool, 10,223. Population, 1824.

ESSEX COUNTY, lies in the northeast corner of the state, and was incorporated by act of the Legislature, November, 5, 1792. It is bounded north by Canada, east and south by Connecticut river, which separates it from Coos county, New Hampshire, southwest by Caledonia county, and west by Orleans county. It is about 45 miles long from north to south, and 23 broad from east to west, lying between lat. 44° 20' and 45°, and long. 4° 51' and 5° 28'. This county is the least populous in the state, with the exception of Grand Isle county. There are some towns which are entirely destitute of inhabitants. The settlements are mostly confined to the towns lying along Connecticut river. The county is in general very uneven and the soil rocky and unproductive. It comprehends that part of

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FAIRFIELD

the country called upper Coos, which lies on the west side of Connecticut river. Nulhegan river is the principal stream, which is wholly within the county. This and several smaller tributaries, of the Connecticut, water all the eastern parts. Passumpsic and Moose river, rise in the southwestern part, and Clyde river and several streams, which run off to the north into Canada, water the northwestern parts. Its shire town is Guildhall. The supreme court sits here, on the 8th after the 4th Tuesday in January, and the county court, on the last Tuesday in May and the third in December. *Statistics of 1840.*—Horses, 1,207; cattle, 6,837; sheep, 14,188; swine, 3,639; wheat, bu. 11,161; barley, 2,223; oats, 46,485; rye, 1,537; bu. wheat, 15,070; In. corn, 6,709; potatoes, 235,180; hay, tons, 13,167; sugar, lbs. 99,385; wool, 23,605. Pop. 4226.

FAIRFAX, a post township in the south part of Franklin county, is in lat. $44^{\circ} 42'$ and long. $3^{\circ} 56'$, and is bounded north by Fairfield, east by Fletcher, south by Westford, and west by Georgia. It is situated 20 miles northeast from Burlington, and 40 northwest from Montpelier, and was chartered August 18, 1763. Broadstreet Spafford and his two sons, Nathan and Asa, came into this township from Piermont, N. H., in 1783, and began improvements. They soon after removed their families here. A Mr. Eastman started from N. H. with them, with his family, but died on the road, and was buried in a trough on the flats in Johnson. His family came to Fletcher. The town was organized March 22, 1787, and Thomas Russell was first town clerk. The first saw and grist mill were erected by John Fassett. The religious denominations are Baptists, Congregationalists, Methodists and Episcopalians. The first settled minister was Elder Amos Tuttle. He was settled over the Baptist church in 1806, and dismissed about the year 1811. The Rev. Eben H. Dorman was settled over the Congregational church and society in 1814, and dismissed in 1823. There are two meetinghouses, one owned by the Baptists and Congregationalists, and the other by the Methodists. The epidemic of 1813 prevailed here and was very mortal. The surface of this township is somewhat uneven, and the soil light and easily cultivated, producing good corn and rye. Its principal streams are the river Lamoille, which runs through the south part, and Brown's river and Parmelee's and Stone's brook, its tributaries, all of which afford good mill privileges. The great falls, on the Lamoille, 88 feet in 30 rods, are situated in the southeast part of the town, and

afford some of the best water privileges in the state. The town is divided into 17 school districts, each of which has a school house. There are here 2 small villages, a town house, 1 grist and 10 saw mills, 2 clothier's works, 2 carding machines, 2 stores, 2 taverns, 2 tanneries 1 stone ware factory, and 1 pottery. *Statistics of 1840.*—Horses, 331; cattle, 2,407; sheep, 11,068; swine 1,148; wheat, bushels, 3,188; oats, 9,041; rye, 1,378; buck wheat, 7; Indian corn, 9,191; potatoes, 42,730; hay, tons 4,105; sugar, lbs. 38,330; wool, 20,315. Population, 1,919.

FAIRFIELD, a post town nearly in the centre of Franklin county, and including Smithfield, which was annexed to it in 1792, contains about 60 square miles. It is situated about 30 miles northeast from Burlington, in lat. $44^{\circ} 49'$ and long. $4^{\circ} 5'$, and is bounded north by Sheldon, east by Bakersfield, south by Fletcher and Fairfax, and west by St. Albans and Swanton. It was chartered August 18, 1763, and granted to Samuel Hungerford, and his associates. The first settler of this town was Mr. Joseph Wheeler. He moved into it with his family in March, 1788. In 1789, Hubbard Barlow and Andrew Bradley, with several others, moved into the town. Smithfield Beaden, was the first child born here, in the part called Smithfield. The proprietors made him a present of 100 acres of land. The town was organized in March, 1790. Edmund Town was the first town clerk. There are a Congregational, a Baptist, an Episcopal and a Methodist church in this town. The Rev. Benjamin Wooster was settled over the Congregational church in 1805. He was the first settled minister, and died in this town Feb. 13, 1840 aged 77 years. The present minister is the Rev. T. Reynolds. The Episcopal church, called *Trinity church*, was the only one in Franklin county when the Rev. Stephen Beach, took charge of it in 1815. Several clergymen labored here more or less previous to 1840, when the Rev Ezekiel H. Sayles, the present minister, was settled. This church consists of about 60 members. An Academy was incorporated here in 1808, and a convenient building erected for its accommodation. *Black creek* is a considerable stream, which issues from Metcalf pond in Fletcher, and runs through this township, affording an excellent stand for mills. Fairfield river is a small stream, which, also, takes its rise in Fletcher, and passes through the town near its centre, affording several good mill privileges. These streams unite and fall into Missisco river in Sheldon. Smithfield pond, lying in the westerly part of the town, is about

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FAIRLEE

three miles long and one and a half broad. At the outlet is an excellent stand for mills, and another on the same stream about two miles below. The township was originally covered principally with hard wood. The surface is uneven, but very little of it so broken as to be unfit for cultivation. The soil is generally good. The town is divided into 15 school districts, with a comfortable schoolhouse in each. The public buildings are an Academy, townhouse, an Episcopal and a Congregational church. There are in town, 3 stores, 4 grist mills 8 saw mills, 2 fulling mills, 1 carding machine, and 2 tanneries. *Statistics of 1840.*—Horses, 530; cattle, 3,636; sheep, 9,700 swine, 800; wheat, bu. 4,270; barley, 35; oats, 7,071; rye, 718; buck wheat, 1,770; indian corn, 5,685; potatoes, 76,920; hay, tons, 7,765; sugar, lbs. 71,765; wool, 24,663. Population, 2,448.

FAIR-HAVEN, a post town in the western part of Rutland county, is in lat. 43° 36' and long. 3° 48' and is bounded north by Benson, east by Castleton and a part of Poultney, south by Poultney river, which separates it from Hampton, N. Y., and west by West Haven. It is 60 miles south from Burlington, and 52 north from Bennington, and was chartered, October 27, 1779, to Ebenezer Allen and his associates. The settlement was commenced the same year by John and William Meacham, Oliver Cleveland, Joseph Ballard and Joseph Haskins, with their families. In 1783, Col. Matthew Lyon, Silas Safford and others moved into town, and the former commenced erecting mills. Col. Lyon had in operation at Fair Haven before 1796 1 furnace, 2 forges, 1 slitting mill, 1 printing office, 1 paper mill, 1 saw mill, and 1 grist mill, and he did printing on paper manufactured by himself from bass wood bark.* The first settlers were from Connecticut and Massachusetts. The town was organized in 1783. Eleazer Dudley was first town clerk, and Matthew Lyon first representative, both chosen this year. Silas Safford was appointed the first justice of the peace, which office he held 40 years successively. Col. Lyon, who has figured in the political world, was a native of Ireland. He emigrated to this country, when 16 years old, and was sold in Connecticut for his passage. The Rev. Rufus Cushman was ordained over the Congregational church Feb. 12, 1807, and died Feb. 3, 1829. The Rev. Amos Drury was settled May 6, 1829 and dismissed in May 1837. This church was organized in 1803. The Rev. Francis C. Woodworth is the present

minister. There are also some Baptists, Methodists and Episcopalians here. The epidemic of 1812 and 13 was very mortal, and in 1822, the dysentery was epidemic, and, in many cases, fatal. The surface of the township consists of swells and vales, but there is nothing which deserves the name of a mountain. The soil is various, consisting of gravel, sand, and marl. Along the rivers, the soil is alluvial and very productive. The timber is pine, hemlock, beech, maple, walnut, butternut, button wood, &c. The principal streams are Poultney and Castleton rivers. The former rises among the mountains in the southeast, and divides this township from New-York. The latter originates principally from a large spring in the west part of Rutland. About one mile above Fair-Haven village it receives the waters of lake Bombazine, and one mile west of the village it joins Poultney river, and, after running three miles further, falls into East bay. Between the junction of these streams and East bay are two considerable falls. (*See Poultney River.*) In the village of Fair-Haven, on Castleton river, are two falls, on which are a paper mill, a rolling and slitting mill, an extensive nail factory, 1 grist and 1 saw mill, 1 forge and 1 tannery. Nails and paper are annually manufactured here to a large amount. In the lower part of the village are about 12 or 15 dwelling houses, and about the same number in the upper part. The latter are built around a handsome Green, containing ten acres, and elevated about 60 feet above the bed of the river. On the north end of the green stands the Congregational meeting house, erected in 1811. In addition to the above, there are, in this town, 2 saw mills, 2 taverns, 2 stores and 1 tannery. *Statistics of 1840.*—Horses, 112; cattle, 761; sheep, 4,105; swine, 336; wheat, bush. 599; oats, 2,035; rye, 1,339; buck wheat, 165; ind. corn, 3,205; potatoes, 8,085; hay tons, 1,449; sugar, lbs. 620; wool, 8,242. Population, 633.

FAIRLEE, a post town in the east part of Orange county, is in lat. 43° 56' and long. 4° 20', and is bounded north by Bradford, east by Connecticut river, which separates it from Orford N. H., south by Thetford and west by West-Fairlee. It is 35 miles north from Windsor and 17 from Dartmouth College. It was chartered September 9, 1761, to Jorish Chauncey, Joseph Hubbard and others, and including West-Fairlee, was laid out six and a half miles square. The settlement was commenced in 1766 by a Mr. Baldwin who had settled the year before in Thetford. In 1768, Samuel Mil-

* Letters by J. A. Graham, page 80.

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ler, Samuel Bentley, and William and David Thompson, Noah Dewey and Joel White, were settled here. About the year 1775, Samuel Smith was chosen town clerk, and held that office till his decease in March, 1820. Feb. 25, 1797, the western half of this township was set off and constituted a separate town by the name of West-Fairlee. The division line was run from north to south through the centre of the original township. The greater part of the inhabitants of this town are Congregationalists. In 1806, they erected a meetinghouse, and the Rev. Dan Blodgett is their present minister. Previous to the year 1815, the inhabitants of Fairlee and West-Fairlee constituted but one militia company. In that year the militia of Fairlee were organized into a separate company. Fairlee is in general mountainous and broken, and much of it unfit for cultivation. The mountains in some places approach very near Connecticut river, and form almost perpendicular precipices several hundred feet in height, particularly a little north of Fairlee meetinghouse. The timber is mostly pine and hemlock. Fairlee lake is about a mile west of Connecticut river, and is two miles long and three fourths of a mile wide. In 1809 Samuel Morey, procured a number of pickerel from a pond in Rumney, N. H., and put them into Fairlee pond. In Oct. following the Legislature of Vermont passed an act for the preservation of the fish in this pond for two years. Since that time they have increased very rapidly and are found to be of an excellent quality. A bridge connects this town with Orford, N. H. There are in this town, one grist, and 4 saw mills and 2 stores. *Statistics of 1840*—Horses, 141; cattle, 580; sheep, 2,815; swine, 465; wheat, bush. 1,055; barley, 40; oats, 7,515; rye, 970; buck wheat, 880; Indian corn, 3,050; potatoes, 18,100; hay, tons, 1,690; sugar lbs. 1,845; wool, 5,655. Population, 644.

FAIRLEE LAKE. See Fairlee.

FAYETTEVILLE, the name of the village in Newfane in which the county buildings in Windham county are situated. (See Newfane.)

FAYSTON, a township six miles square, in the southwest corner of Washington county, is in lat. 44° 13' and long. 4° 9', and is bounded north by Duxbury, east by Waitsfield, south by a part of Warren and Lincoln, and west by Huntington. It is situated 27 miles southeast from Burlington, and 17 southwest from Montpelier. It was granted February 25, and chartered February 27, 1782, to Ebenezer Walbridge and his associates. The set-

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tlement was commenced in the year 1798 by Lynde Wait, Esq. In 1800 there were 18 persons in town. The land is elevated, lying in large swells. It is principally timbered with hard wood, and the soil is fertile, producing good crops of grain and grass. Two streams, head branches of Mad river, pass through the town, which are sufficient for mills, and four saw mills have been erected. *Statistics of 1840*: Horses, 118; cattle, 677; sheep, 1,986; swine, 405; wheat, bushels, 1,651; barley, 25; oats, 3,509; rye, 162; buckwheat, 618; Ind. corn, 1,189; potatoes, 22,593; hay, tons, 1,905; sugar, lbs. 24,134; wool, 3,833. Population, 635.

FARRAND'S RIVER, heads in Avery's and Warner's Gores, runs nearly south, through the corners of Morgan and Wenlock, and unites with Clyde river, in Brighton.

FERDINAND, an uninhabited township in Essex county, chartered October 13, 1761, and containing 23 square miles. It is bounded northerly by Wenlock, easterly by Maidstone, southerly by Granby and East Haven, and westerly by Brighton. This township is watered by the principal branch of Paul's stream. The surface of the township generally is either mountainous or swampy.

FERRISBURGH, a post town in the northwest corner of Addison county, is in lat. 44° 12' and long. 3° 48', and is bounded north by Charlotte, east by Monkton and New Haven, south by Waltham, Vergennes and Panton, and west by lake Champlain, which separates it from the state of New York. It lies 19 miles south from Burlington and 34 west from Montpelier. It was chartered June 24, 1762, to several persons by the name of Ferris, and others. More than half of Vergennes was taken from this township. The first permanent settlement was made in 1784 and 1785, by Mr. Ward, Abel Thompson, Gideon Hawley, Timothy Rogers, Joseph Chilson, Jona. Saxton, and Zuriel and Absalom Tupper, emigrants from Bennington, in this state, and from Connecticut. The town was organized in 1786. J. Saxton was the first town clerk, and Abel Thompson the first representative. The religious denominations are Baptists, Methodists, Congregationalists and Friends; each of which have been formed into a society. The Friends have a meeting house in the easterly part, the Methodists in the northerly part, and there is a union house near the centre; the two latter were built in 1839. Neither of these denominations has a settled minister. The Methodists are supplied by circuit preachers. The township has always been

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considered healthy, and several have lived here to be near 100 years old. The epidemic of 1812 and '13 was very mortal here, and carried off between 60 and 70 persons, mostly adults. This township is watered principally by Otter, Little Otter and Lewis creeks. Otter creek enters the township from Vergennes, and after running northwesterly about eight miles, across the southwest part, falls into lake Champlain about three miles south of the mouth of Little Otter creek. Little Otter and Lewis creeks run through the township in a westerly direction, the former through the middle, and the latter through the north part. The mouths by which they are discharged into the lake are within 80 rods of each other. Otter creek is navigable eight miles to Vergennes, and Little Otter creek three miles, by the largest vessels on the lake. In Little Otter creek are four, and in Lewis creek three commodious falls, on which mills and other machinery are erected. Large quantities of pike, bass, &c., are annually taken in the spring of the year about the mouths of these streams. About three miles north of the southwest corner of the township is one of the best harbors on the lake, called *Basin harbor*. Five miles northwest from Vergennes, and a short distance south of the mouth of Little Otter creek, is a ferry across the lake, which is here something more than two miles wide. This place is known by the name of *Grog harbor*, taking its name from the landing place in Essex, on the New York side. The surface of the northeastern part of this township is somewhat hilly. The remaining parts, especially the western, are remarkably level and smooth. The uplands are timbered mostly with maple, beech, basswood and butternut; the level and low lands are timbered with pine interspersed with oak, walnut, &c. No township in the state has afforded more or better timber for market than this. The soil is very various, some parts of it being clayey, while others consist of rich mould, which is easily tilled and very productive. In favorable seasons crops of most kinds are abundant. In 1823, one acre here produced 120 bushels of corn, which cost ten days labor, and two bushels of plaster of Paris, (*gypsum*). The same kind of soil has produced 50 bushels of wheat, 70 of oats, &c., per acre. It is a good grazing township, and large numbers of fat cattle are yearly driven from it to market. There are here 1 grist and 3 saw mills, and 1 store. *Statistics of 1840.* Horses, 496; cattle, 5,183; sheep, 25,676; swine, 871; wheat, bus. 2,700; barley, 18; oats,

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10,900; rye, 550; buckwheat, 658; Indian corn, 8,910; potatoes, 21,680; hay, tons, 12,000; sugar, lbs. 1,400; wool, 65,690. Population, 1,755.

FIFTEEN-MILE FALLS, the name given to the rapids in Connecticut river, between Lunenburg and Barnet.

FLANSTEAD, *see Chester*.

FLETCHER, a post town in the south part of Franklin county, is in lat. 44° 42' and long. 4° 7', and is bounded north by Bakersfield and Fairfield, east by Waterville, southeast by Cambridge, and southwest by Fairfax. It lies 22 miles northeast from Burlington, and 35 northwest from Montpelier. It was granted November 7, 1780, and chartered to Moses Robinson, John Fay and others, August 20, 1781. The settlement was commenced in 1784. The river Lamoille just touches upon the southern extremity of this township. Metcalf pond is about one mile long from north to south, and one third of a mile wide from east to west. It discharges its waters at the south end, forming one of the head branches of Black creek. This stream runs a southeasterly course about two miles into Cambridge, and, after crossing the corner of that township, returns again into Fletcher, and passes off to the north. Fairfield river also rises in Fletcher, and is joined in Fairfield by Black creek. Stone's brook waters the western part. The surface of this township is considerably broken. There are here one grist and three saw mills, and two stores. *Statistics of 1840.* Horses, 175; cattle, 1,235; sheep, 3,335; swine, 278; wheat, bus. 1,717; barley, 64; oats, 3,750; rye, 1,000; buckwheat, 400; Indian corn, 2,000; potatoes, 36,200; hay, tons, 2,680; sugar, lbs. 38,650; wool, 6,558. Population, 1,014.

FOUR BROTHERS are four small islands situated 6 or 7 miles to the southwest of Burlington, and lying within the limits of New York. They are uncultivated, and lying out of the usual line of navigation, the water fowls find among them a quiet retreat, where gulls and others rear their young. These islands are named on Charlevoix's map, published in 1744, *Isles des 4 Vents*, or Isles of Four Winds.

FRANKLIN, a post town in the north part of Franklin county, is in lat. 44° 58' and long. 4° 6', and is bounded north by St. Armand, in Canada, east by Berkshire, south by Sheldon, and west by Highgate. It lies 36 miles northeast from Burlington, and 51 northwest from Montpelier. It was granted October 24, 1787, and chartered to Jonathan Hunt and his associates, March 19, 1789, by the name of Huntsburg. The settlement was com-

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menced in 1789, by Samuel Hubbard, Samuel Peckham, David Sanders, and John Bridgeman, mostly emigrants from Massachusetts. The town was organized in 1793. Ebenezer Sanders was the first town clerk, and Samuel Peckham the first representative. The religious denominations are Congregationalists, Methodists, Episcopalians and Baptists. The present minister of the Congregational church is the Rev. E. W. Kellogg, of the Methodist, Rev. G. M. McKillips, and of the Baptist, Rev. John Spalding. There is a small village, and a union meeting house. The first physician was Ebenezer Marvin, and Ebenezer Marvin, Jr. was the first attorney. The river Rocher, or Rock river, rises in this township and falls into Missisco bay in Highgate. It is also watered by several small branches of Missisco and Pike rivers. The township is injured very much by a large pond, which lies near the centre. This pond is three miles long and about one mile wide. There are in the town 5 school districts, one woollen factory, one starch factory, one grist and 4 saw mills. *Statistics of 1840.* Horses, 251; cattle, 1,752; sheep, 6,288; swine, 383; wheat, bus. 3,256; oats, 4,843; rye, 372; buckwheat, 583; Indian corn, 2,940; potatoes, 57,870; hay, tons, 3,438; sugar, lbs. 25,720; wool, 11,635. Population, 1,410.

FRANKLIN COUNTY is situated in the northwestern part of the state, and is bounded north by Canada, east by Orleans county, south by Chittenden county, and west by Grand Isle county, from which it is separated by a part of lake Champlain. It is situated between lat. 44° 31', and 45° and between long. 3° 47' and 4° 27', extending about 34 miles from east to west, and about 33 from north to south, and containing 600 square miles. It was incorporated November 5, 1792. St. Albans is the shire town, and is a place of considerable business. The supreme court sits here on the 2d Tuesday in January, and the county court on the 2d Tuesday in April and September. The Missisco river waters the north part of this county, and the Lamoille the south part. The eastern part extends onto the western range of the Green Mountains, and is high and broken; the western part is generally level, and is a very fine farming country. The settlement of the county was commenced immediately after the close of the revolutionary war, and it is now rapidly increasing in population and wealth. Very fine marble is found in abundance in Swanton, and iron ore in Highgate. *Statistics of 1840.*—Horses, 4,427; cattle, 26,965; sheep, 87,385;

swine, 8,935; wheat, bus. 48,686; barley, 599; oats, 94,700; rye, 10,144; buckwheat, 9,603; Indian corn, 65,534; potatoes, 709,396; hay, tons, 61,263; sugar, lbs. 400,775; wool, 225,802. Population, 24,532.

FRENCH RIVER. *See Winöoski River.*

FULHAM. Name altered to Dummerston.

GAGGBOROUGH, a New York Grant where Chelsea now is.

GEORGIA, a post township in the southwestern part of Franklin county, is in lat. 44° 44' and long. 3° 54', and is bounded north by St. Albans, east by Fairfax, south by Milton, and west by lake Champlain. It lies 18 miles north from Burlington, and 41 northwest from Montpelier. It was chartered August 17, 1763, and contains about 36 square miles. The settlement was commenced in 1784 and 1785, by Andrew Guilder, from Agremont, Ms., and William Farrand, from Bennington, Vt., with their families. During the two following years, a great number of families, mostly from Bennington and the western part of Massachusetts, moved into the town, and a considerable number of young men without families. The first settlers of Georgia had their share of those privations and hardships which are incident to the settlers of new townships. They, at first, had to go to Burlington and Plattsburgh for their grinding, but the population increased so rapidly that mills were soon erected. The town was organized March 12, 1788. Reuben Evarts was the first town clerk, and James Evarts the first representative. The Congregationalists, Baptists and Methodists are the most numerous denominations of Christians. The Rev. Publius Virgil Bogue was settled over the Congregational church and society October 8, 1803, and dismissed October 20, 1813. The Rev. Eben H. Dorman was ordained over this church November 15, 1815, and dismissed November 15, 1824. The Rev. Luther P. Blodget, June, 1828, and dismissed January, 1830; the Rev. George W. Ranslow, the present pastor, June 19, 1833. Elder Roswell Mears was settled over the Baptist church July 1, 1807, and he and the Rev. Alvah Sabin are the present ministers. The epidemic of 1812 was very mortal here. About 30 persons died in the space of three months. The river Lamoille, which runs through the southeast corner of the township, is the principal stream. In the northeast part is a pond covering 30 or 40 acres. It is surrounded by high lands, except a narrow outlet to the north, and is bordered by a grove of alders. The mill privileges are numerous, there being no less than

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GLOVER.

12. The soil is sandy in the south part, and the timber principally pine. In the north part it is a gravelly loam, and the timber mostly hard wood. The rocks, in the western part, are limestone, in the eastern part, slate. The soil is, in general, rich and productive. There are some tracts timbered with hemlock, and some cedar swamps near the lake. Over what is called *Stone Bridge* brook, in the southwestern part of the township, is a natural bridge 12 or 14 feet wide, and the top of it seven or eight feet above the surface of the water. The width of the arch is 40 or 50 feet, and its height but a few inches above the surface of the stream. A large and elegant meeting house was completed in this town in 1802, and around it is a small village, containing a number of dwelling houses, stores, shops, &c. There are 2 grist mills, which are of stone, three saw, and one oil mill, 3 stores, and two tanneries. *Statistics of 1840.* Horses, 366; cattle, 1,915; sheep, 10,935; swine, 1,140; wheat, bus. 3,897; barley, 20; oats, 8,931; rye, 2,545; buckwheat, 1,072; Indian corn, 7,875; potatoes, 34,616; hay, tons, 4,476; sugar, lbs. 17,957; wool, 26,467. Population, 2,106.

GLASTENBURY, a township in Bennington county, is in lat. 42° 58' and long. 4° 1', and is bounded north by Sunderland, east by Somerset, south by Woodford and west by Shaftsbury. It lies nine miles northeast from Bennington, and 25 northwest from Brattleborough, and was chartered August 20, 1761, containing about 40 square miles. A great part of this township is high, broken and incapable of ever being settled. Settlements were early commenced here, but the population has never yet amounted to 100 persons. The waters in the eastern part flow into Deerfield river. From the other parts, they pass off to the south and west into the Walloomscoik. The streams are small. *Statistics of 1840.*—Horses, 14; cattle, 16; sheep, 62; swine, 32; wheat, bus. 18; oats, 38; rye, 12; buckwheat, 6; Indian corn, 25; potatoes, 880; hay, tons, 162; sugar, lbs. 575; wool, 127. Population, 53.

GLOVER, a post town, six miles square, in the southern part of Orleans county, is in lat. 44° 40' and long. 4° 45', and is bounded north by Barton, east by Sheffield, south by Greensborough, and west by Albany. It lies 33 miles northeast from Montpelier, was granted June 27, 1781, and chartered to Gen. John Glover and his associates, November 20, 1783. The settlement of this township was commenced about the year 1797, by Ralph Parker, James Vance, Samuel Cook and

Samuel Conant. The settlement advanced very slowly for some years. In 1800, there were 38 persons in town. The principal religious societies are Congregationalists and Methodists. There is a pleasant and thriving little village, containing a handsome meeting house, a store, tavern, and several mechanics. The surface of the township is very uneven, consisting of hills and vallies. In the south part is a small mountain called Black hill. The town is watered principally by the head branches of Barton river. Branches of the Passumpsic, Lamoille, and Black river, also rise here. There are four natural ponds which lie within this township, viz: Glover pond in the northern part, Daniel's pond in the western part, Chamber's near the centre, and Mud pond in the southeastern part, all of which discharge their waters into Black river. Long pond, now better known by the name of *Runaway* pond, was situated partly in this township and partly in Greensborough. This pond was one and a half mile long, and about half a mile wide, and discharged its waters to the south, forming one of the head branches of the river Lamoille. On the 6th of June, 1810, about 60 persons went to this pond for the purpose of opening an outlet to the north into Barton river, that the mills, on that stream, might receive from it an occasional supply of water. A small channel was excavated, and the water commenced running in a northerly direction. It happened that the northern barrier of the pond consisted entirely of quicksand, except an encrusting of clay next the water. The sand was immediately removed by the current, and a large channel formed. The basin formed by the encrusting of clay was incapable of sustaining the incumbent mass of waters, and it broke. The whole pond immediately took a northerly course, and, in fifteen minutes from this time, its bed was left entirely bare. It was discharged so suddenly that the country below was instantly inundated. The deluge advanced like a wall of waters, 60 or 70 feet in height, and 20 rods in width, leveling the forests and the hills, and filling up the vallies, and sweeping off mills, houses, barns, fences, cattle, horses and sheep as it passed, for the distance of more than ten miles, and barely giving the inhabitants sufficient notice of its approach to escape with their lives into the mountains. A rock, supposed to weigh more than 100 tons, was removed half a mile from its bed. The waters moved so rapidly as to reach Memphremagog lake, distant 27 miles, in about six hours from the time

GOSHEN.

GOSHEN GORE.

GRAFTON.

they left the pond. Nothing now remains of the pond but its bed, a part of which is cultivated, and a part overgrown with trees, bushes and wild grass, with a small brook running through it, which is now the head branch of Barton river. The channel, through which the waters escaped, is 127 feet in depth and several rods in width. A pond, some distance below, was, at first, entirely filled with sand, which has since settled down, and it is now about one half its former dimensions. Marks of the ravages are still to be seen through nearly the whole course of Barton river. The soil, in the middle and western part of Glover, is, in general, wet and cold, but very good for grazing. On the river it is dry and warm, and better adapted to the production of grain and Indian corn. There were in the township about 1000 acres of land belonging to the old Vermont State Bank. Some iron ore has been discovered, and sulphur springs are common; also several beds of marl, which makes excellent lime. Considerable quantities of pot and pearl ashes, beef, pork, butter and cheese are produced for market. There are, in town, three grist, and six saw mills, one fulling mill and one tannery. *Statistics of 1840.*—Horses, 276; cattle, 1,507; sheep, 4,797; swine, 944; wheat, bus. 3,129; barley, 1,163; oats, 9,323; rye, 136; buckwheat, 515; Indian corn, 1,947; potatoes, 54,708; hay, tons, 3,448; sugar, lbs. 61,430; wool, 15,718. Population, 1,119.

GOSHEN, a township in the southeastern part of Addison county, is in lat. 43° 56' and long. 4° 4', and is bounded north by Ripton and Hancock, southeast by Pittsfield and Chittenden, southwest by Brandon and Leicester, and northwest by Salisbury. It lies 31 miles southwest from Montpelier, and 43 northwest from Windsor; was granted February 23, 1782, chartered to John Rowell, William Douglass and others, February 2, 1792, and received a new charter November 1, 1798. November 9, 1814, the northern half of Philadelphia was annexed to this township. No permanent settlement was commenced here until about the year 1800. Considerable part of it is mountainous, but there is some very good land, and the settlement has advanced considerably within a few years. Leicester river rises in Hancock, and runs through the township in a westerly direction. Philadelphia river originates in the south part. Iron ore and the oxyde of manganese are found here. It contains six saw mills. *Statistics of 1840.*—Horses, 132; cattle, 516; sheep, 1,960; swine, 250; wheat, bus. 1,040; oats, 4,800; rye, 350; buck-

wheat, 160; Indian corn, 516; potatoes, 18,600; hay, tons, 1,360; sugar, lbs. 5,230; wool, 5,116. Population, 621.

GOSHEN GORE. There are two gores of this name, and both in Caledonia county. The largest contains 7,339 and is bounded north by Wheelock, east by Danville, south by Walden, and west by Greensborough. The first permanent settlement was made here in 1802, by Elihu Sabin, and his daughter Mary was the first child born. In the northeast corner of the gore is a pond covering about 80 acres. It is watered by a branch of the Lamoille river. *Statistics of 1840.*—Horses, 27; cattle, 180; sheep, 429; swine, 100; wheat, bus. 265; barley, 100; oats, 1,420; Indian corn, 56; potatoes, 7,920; hay, tons, 559; sugar, lbs. 7,760; wool, 912. Population, 143. The other gore of this name is situated in the southwest corner of Caledonia county, and contains 2,828 acres. It is bounded north by Marshfield and a part of Harris' gore, east by Harris' gore, south by Orange, and west by Plainfield. Gunner's branch passes through the south part of this gore. Population, 44.

GRAFTON, a post town in the north part of Windham county, is in lat. 43° 11' and long. 4° 25', and is bounded north by Chester, east by Rockingham, south by Athens and Acton, and west by Windham. It lies 36 miles northeast from Bennington, and 22 southwest from Windsor. It was chartered April 6, 1754, and rechartered September 1, 1763, by the name of Tomlinson, and contains about 40 square miles. A Mr. Hinkley and two other families came into this township about the year 1768, and began a settlement on what is called Hinkley brook. They, however, soon abandoned it, and no permanent settlement was made till 1780. In the spring of this year, Amos Fisher, Samuel Spring, Benjamin Lathabee and Edward Putnam moved into the township from Winchester, Massachusetts. Aaron Putnam was appointed town clerk at the time the town was organized, and Thomas Kenney was the first representative. The religious denominations are Congregationalists and Baptists. The Congregational church, was organized June 28, 1785; settled the Rev. Wm. Hall, Nov. 7, 1788, who was dismissed in 1810. The Rev. Wm. Goodell was settled Aug. 29, 1814, and dismissed April 11, 1822; the Rev. Selah R. Arms was settled June 5, 1825, and dismissed Oct. 30, 1831. The Rev. Moses Bradford, the present minister, was settled Oct. 30, 1832. Elder Shumway was ordained April 26, 1810, and preached to

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the Baptist church about two years. July 7, 1819, Elder John R. Dodge was ordained over the Baptist church, and was dismissed Sept. 26, 1822. The Congregationalists have a meeting house, erected in 1792, and the Baptists, one, built in 1814. The township is watered principally by Saxton's River, which is formed here by the union of several branches. A branch of William's river runs through the north part nearly parallel to the north line. These streams afford several very good mill privileges. The township is considerably uneven, and it abounds in a great variety of minerals. About two miles south from the Congregational meeting house is an immense quantity of excellent steatite, or soap stone, which is quarried to a great extent. Large blocks of it are removed from the ledge by saws, wedges, and bars, and transported about a mile to a mill, whose machinery is moved by water, where it is sawn. It is then manufactured into aqueducts, pumps, jambs, ovens, mantle pieces, stoves, &c. The blocks sawn and bored for the aqueducts are two or three feet long, and three or four inches square. They are sold at the manufactory, completely prepared to be put down, at the astonishing low price of \$1.00 per rod. They are found to be much more durable and less liable to get out of repair than wood, and impart no unpleasant taste to the water. In connexion with the steatite are found fine green laminated talc, chlorite, potstone and crystals of actynolite, and bitter spar. The potstone is of a greenish gray color, and is less frangible than the steatite. The crystals of actynolite are large, and of a light green color. Those of bitter spar are of different sizes, presenting rhomboidal surfaces, and are embedded in the steatite. They are usually perfect, but not transparent. Their color is a light gray, and their lustre more pearly than that of calcareous spar. Their structure is distinctly laminated, and they dissolve without effervescence in diluted nitric acid. Cyanite, or sappare, is found about one mile southwest from the meeting house, on the farm of a Mr. Spaulding. It is of a light blue color, and is in compressed hexagonal prisms in mica slate and in massive garnet. There is another locality of it about one mile east from the centre of the township, where it is embedded in quartz. Garnets abound both in talcose and mica slate, and hornblende is very common. Also the sulphuret of iron in small brown cubes, plumose mica on mica slate, limpid quartz in transparent crystals, greasy and milky quartz, schorl and precious serpentine. The schorl is

three miles west from the meeting house, in quartz and mica slate. It is in triangular prisms, bevelled at their lateral edges, and striated longitudinally, having triedral terminations. The serpentine is all in one mass, of 30 or 40 tons weight, lying on the western declivity of a small hill, and in full view from the meeting house. Its interior is of a uniform dark green color. It is hard to break, and its fracture splintery. There are two small villages; one at the centre and the other at the junction of the two branches which form Saxton's river. There are 2 grist, 6 saw and 3 fulling mills, 3 carding machines, and 3 stores. *Statistics of 1840.*—Horses, 273; cattle, 1,728; sheep, 10,114; swine, 1,166; wheat, bush. 1,386; barley, 146; oats, 5,229; rye, 1,238; buckwheat, 618; Ind. corn, 4,859; potatoes, 31,646; hay, tons, 3,363; sugar, lbs. 16,185; wool, 20,164. Population, 1,326.

GRANBY, a township in Essex county, situated in lat. 44° 35' and long. 5° 9', contains 36 square miles. It lies 47 miles northeast from Montpelier, and is bounded northeast by Ferdinand and Maidstone, southeast by Guildhall, southwest by Victory, and northwest by East Haven. Chartered October 10, 1761. A considerable settlement had been formed in this town previously to the year 1800, and the numbers continued to increase with considerable rapidity till after the year 1810. But when the cold seasons commenced the people began to abandon their settlements, and continued to leave the town till 1816, when there were only three families left, and the town lost its organization. After this period the numbers began to increase, and the town was reorganized in December, 1821. A branch of Paul's stream, one of the head branches of Moose river, and some other small streams rise in this town. *Statistics of 1840.*—Horses, 29; cattle, 122; sheep, 257; swine, 63; wheat, bu. 191; barley, 78; oats, 378; rye, 27; buckwheat, 94; Ind. corn, 14; potatoes, 3,680; hay, tons, 257; sugar, lbs. 1,925; wool, 325. Popu. 105.

GRAND ISLE, a post town in Grand Isle county, is in lat. 44° 43' and long. 3° 42' and has the lake on all sides, except the south, where it is bounded by South Hero. It lies 50 miles northwest from Montpelier, and 18 from Burlington. It was granted, in connexion with South Hero, October 27, 1779. The settlement of the township was commenced about the year 1783, by Alexander Gordon, William Hazen and Lamberton Allen, emigrants from New-Hampshire, and the southern parts of this state. For some years after the settlement commenced, many circumstances

GRAND ISLE COUNTY.

GRANVILLE.

tended to prevent its progress. Sickness, with its concomitant miseries, presented the most formidable obstacle. Fever and ague and bilious fevers, engendered by the noxious vapours from the surrounding waters and the low and marshy grounds, were very prevalent, and were fatal in their ravages. No age, or sex, was exempt from their attack. In addition to this, the settlers often suffered from extreme scarcity of provisions. Hunting and fishing were, for some time, their only means of gaining a subsistence. These obstacles cooled their ardor and damped their ambition. Previous to the year 1809, this township constituted a part of South Hero. This year, it was erected into a separate township by the name of Middle Hero, and was organized. The first town clerk was James Brown, and the first representative Asa Lyon. November 5, 1810, the name was altered to Grand Isle. The principal religious denominations are Congregationalists and Methodists. The Rev. Asa Lyon, a Congregationalist, preached here many years previous to his death, which occurred in 1840. The Methodist society is supplied by itinerant preachers. The public buildings are a meeting house and a town house. There are several small streams in this township. There are some considerable hills, but nothing which deserves the name of a mountain. The soil is rich, and is not surpassed in fertility by any part of the state. It produces corn and grain in abundance. Fifty bushels of corn per acre, and 25 of rye and wheat are ordinary crops. Among the minerals are marble, limestone, rock crystals, and sulphuret of iron. The township produces a great variety of fruits, particularly apples, in abundance. The timber is various, consisting of beech, birch, maple, oak, ash, elm, pine, &c. *Statistics of 1840.*—Horses, 216; cattle, 1,160; sheep, 6,451; swine, 726; wheat, bush. 2,953; barley, 106; oats, 10,148; rye, 4,022; buck wheat, 1,146; Indian corn, 2,187; potatoes, 19,968; hay, tons, 2,061; sugar, lbs. 9,893; wool, 12,504. Population, 724.

GRAND ISLE COUNTY, is bounded north by Canada, on the north line of Alburgh; the rest of the county consists of islands, which are embosomed in the waters of lake Champlain. It lies between 44° 35' and 45° north lat. and between 3° 39' and 3° 47' east long., being 28 miles long from north to south, and about 5 miles wide, and containing 82 square miles. It was incorporated November 9, 1802. No permanent settlement was made in this county until after

the close of the revolutionary war. The streams here are all small, and there can hardly be said to be a good mill privilege in the county. There has, however been one water grist mill, which did considerable business, and one or two windmills. The surface of the county is generally level, and the soil very rich and productive. The first settlers of this county were subject to fevers and other diseases, induced by the noxious exhalations from the stagnant waters, but, since the lands have become generally cleared and cultivated, the inhabitants have become more healthy. North Hero is the shire town. The supreme court sits here on the 3d Tuesday in January, and the county court on the 1st after the 4th Tuesday in April, and the 4th Tuesday in September. *Statistics of 1840.*—Horses, 1,161; cattle, 5,463; sheep, 27,451; swine, 3,179; wheat, bus. 21,430; barley, 1,655; oats, 43,430; rye, 9,504; buckwheat, 9,216; Ind. corn, 13,816; potatoes, 76,408; hay, tons, 8,593; sugar, lbs. 34,478; wool, 57,546. Population, 3,883.

GRANVILLE, a post town in the eastern part of Addison county, and is bounded northerly by Warren and a part of Roxbury, easterly by Braintree, southerly by Hancock and a part of Rochester and west by Ripton. It lies 22 miles south west from Montpelier, and 42 north west from Windsor, in lat. 43° 59' and long. 4° 10'. It was granted November 7, 1780, and chartered, to Reuben King, August 2, 1781, by the name of Kingston. The name was altered to Granville, Nov. 6, 1834. The settlement of this township was commenced soon after the close of the revolution, by Reuben King and others. In 20 years from the commencement of the settlement there were but 17 deaths, four of them men, two of whom were upwards of 80 years of age, and no estate has been settled by law. Jos. Patrick was the first town clerk, the first justice of the peace, and the first representative. The dysentery prevailed here in 1806, and was very mortal. The religious denominations are Congregationalists and Baptists. White river is formed here by the union of several considerable branches. On one of these is a fall of 100 feet. Fifty feet of the lower part of it is perpendicular, and at the bottom is a hole worn into the rock ten feet deep. A considerable part of the surface of the township is mountainous. *Statistics of 1840.*—Horses, 123; cattle, 560; sheep, 2,100; swine, 440; wheat, bush. 1,006; oats, 5,300; rye, 60; buck wheat, 205; Indian corn, 560; potatoes, 19,200; hay, tons, 1,390; sugar, lbs. 15,900; wool 5,900. Population, 545.

GREEN MOUNTAINS.

GREEN RIVER.—GREENSBOROUGH.

GROTON.

GRASSY BROOK. *See Brookline.*

GREEN MOUNTAINS. (*See part first, p. 3.*) The principal summits of the Green Mountains are Shrewsbury peak in Shrewsbury, Killington peak in Sherburne, Camel's Hump in Huntington, Mansfield mountains in Mansfield, Sterling peak in Sterling, and Jay peak in Jay.

GREEN RIVER. There are two small streams of this name. One rises in Eden, passes through the corner of Hydepark, and falls into the Lamoille in Wolcott. The other originates in Marlborough, and after running through a part of Halifax and Guilford, passes off into Massachusetts.

GREENSBOROUGH, a post town, six miles square, lying in the south part of Orleans county, in lat. $44^{\circ} 36'$ and long. $4^{\circ} 41'$. It is bounded northerly by Glover, easterly by Wheelock and Goshen gore, southerly by Hardwick, and westerly by Craftsbury and a small part of Wolcott. It lies 27 miles northeasterly from Montpelier, and 79 miles north from Windsor. This township was granted November 6, 1780, and chartered August 20, 1781, to Harris Colt and his associates. Messrs. Tolman and Wood visited this town, and spent three days here, in the spring of 1787. In December, 1788, the Hon. Timothy Stanley lost his foot by frost, attending a meeting of the proprietors of this township at Cabot. The first settlement was begun in Greensborough, in the spring of 1789, when Messrs. Ashbel and Aaron Shepard removed, with their families, from Newbury to this place. The hardships which the first settlers of this town had to endure, were very considerable. In coming into the town, the women had to proceed on foot, and all the furniture, belonging to the two families, was drawn upon three hand sleds, on the crust. Both families consisted of five persons, Mr. Ashbel Shepard and his wife, and Mr. Aaron Shepard, his wife and one child. Mr. Aaron Shepard removed his family to Coos in August, and did not return till March, when his brother, Horace Shepard and family, returned with him. Thus were Mr. Ashbel Shepard and his wife, left from August till March, with no other human being in the town. Their nearest neighbors were Mr. Cutler's family, in Craftsbury, which had removed there the preceding autumn, and Mr. Webster's family, in Cabot. Mr. Shepard brought all his grain from Newbury, a distance of more than 40 miles, of which he drew it 16 miles upon a hand sled, with the snow between four and five feet deep. In the same manner, he drew hay for the support of a cow, from a meadow of wild grass, three miles distant. On the 25th

of March, Mrs. Shephard was delivered of a son, William Scott, the first child born in this town. The proprietors voted him a present of 100 acres of land. In 1790, Mr. Joseph Stanley removed his family here, and the same year the Hon. Timothy Stanley erected the first saw mill on the outlet of Caspian Lake. In 1791, Mr. Law and three Messrs. Hills, removed their families here. This year Mr. T. Stanley erected a house and grist mill, and removed his family here in 1792. In 1796, there were 23 families and 108 persons in town. The town organized, March 29, 1792. The denominations of Christians are, Baptists, Congregationalists and Methodists. The Rev. Salmon King was settled over the Congregational church here about the year 1808, and continued a few years. The surface of this town is uneven, but the elevations are not generally abrupt. The land is well timbered, mostly with hard wood, except on the river and about its head waters, where it is almost entirely hemlock, spruce, cedar and fir. The soil is of a middling quality, but on account of its being situated about the head waters of several considerable rivers, much of the land is wet and cold, and the crops are liable to suffer by frost. The river *Lamoille* is formed by the union of several streams in this town. *Caspian Lake* or *Lake Beautiful*, lies in the south part of this town, and discharges its waters to the east into the Lamoille, affording a number of valuable mill privileges, around which has grown up a beautiful little village, containing a meeting house, store, &c. This pond is about 3 miles long, and $1\frac{1}{2}$ broad. *Elligo pond*, lying mostly in the western part of this town, is about a mile long, and forms the head waters of Black river. These ponds produce abundance of fine trout. *Runa-way Pond* (*see Glover*) was partly in this town, and was formerly the source of the Lamoille. There are several other small ponds in the north part of the town, which, at present, form the head waters of the Lamoille. One grist mill, three saw mills, one fulling mill, and one carding machine. *Statistics of 1840.*—Horses, 198; cattle, 1,202; sheep, 4,524; swine, 561; wheat, bu. 2,074; barley, 1,656; oats, 9,907; rye, 64; b'k wheat, 478; Indian corn, 557; potatoes, 42,423; hay, tons, 3,215; sugar, lbs. 43,920; wool, 11,820. Population, 883.

GROTON, a township in the south part of Caledonia county, is in lat. $44^{\circ} 14'$ and long $4^{\circ} 45'$, and is bounded north by Peacham, east by Ryegate, south by Topsham, and west by Harris' gore. It lies 16 miles east from Montpelier, and

GUILDHALL.

GUILFORD.

15 northwest from Newbury. It was granted November 7, 1780, and chartered to Thomas Butterfield and his associates, October 20, 1789, containing 28,300 acres. The settlement of the township was commenced in 1787, by Messrs. James, Abbott, Morse and Osmore. John James was the first male child born in town. The town was organized March 28, 1797, and Nathaniel Knight was the first town clerk. The wife of a Mr. Page, in this town, was, in 1819, delivered of four male children at a birth. The religious denominations are Baptists and Methodists. The ministers are Elder Lyman Culver, Baptist, and Elder James Smith, Methodists. The surface of this township is generally uneven, rough and stoney. There is, however, some very good land, both in the northeast and southwestern parts. The timber is mostly spruce and hemlock, interspersed with maple, beech and birch. This township is watered by Wells river and some of its branches, which afford several good mill privileges. There are also several natural ponds. Wells river pond, through which Wells river passes, is in the north part, and is three miles long and three quarters of a mile wide. Little pond, in the southeastern part, covers about 100 acres, and lies in the course of Wells river. Kettle pond, so called on account of Mr. Hosmer, a hunter, having lost a small kettle in its vicinity, lies in the northwest corner, and covers about 40 acres. The south branch rises in Harris' gore, and running nearly east through the south part of the town, joins Wells river just below Little pond. In the south part of the township is an extensive bank of white clay or marl, which is a very good substitute for chalk, and which has been used instead of lime in plastering, and is said to answer a very good purpose. There are here one grist, seven saw and one fulling mill, two stores and two tanneries. *Statistics of 1840.*—Horses, 169; cattle, 1,138; sheep, 2,061; swine, 605; wheat, bus. 2,185; barley, 306; oats, 13,618; Indian corn, 2,967; potatoes, 31,095; hay, tons, 2,009; sugar, lbs. 20,530; wool, 4,001. Population, 923.

GUILDHALL, a post and shire township in Essex county, situated in lat. 44° 32' and long. 5° 18', containing 19,477 acres, or thirty square miles. It is 50 miles northeast from Montpelier, 25 from Danville, and 83 from Windsor. It is bounded north by Maidstone, east by Connecticut river, south by Lunenburg, and west by Granby, and lies opposite to Lancaster in New Hampshire. Guildhall was chartered October 10, 1761, and gran-

ted to Elisha Hall and his associates. The settlement was commenced in the lower part of this town, which was then thought to be a part of Lunenburg, in 1764, by David Page, Timothy Nash and George Wheeler. In 1775, Enoch Hall, Micah Amy and James Rosbrook joined the settlement; Eleazer Rosbrook and Samuel Page, in 1778, and David Hopkinson, and Reuben and Simeon Howe, in 1779. The first settlers suffered severe privations and hardships for a number of years. They brought their grain and provisions, in canoes, from Northfield in Massachusetts, a distance of more than 150 miles. During the revolutionary war, they were in continual alarm, and frequently annoyed by the Indians and Tories, who killed their cattle, plundered their houses, and carried a number of the inhabitants into captivity. The first town meeting recorded was in March, 1785. But it appears from the records, that the town had been previously organized. The denominations of Christians are Congregationalists, Methodists and Baptists. The Congregational church was formed in 1799; settled the Rev. Caleb Burge, August 3, 1808, who was dismissed in March, 1814. The Rev. James Tisdale was settled September 20, 1830, and dismissed in May, 1836. The Rev. Francis P. Smith, the present pastor, was settled in September, 1838. There have been two county grammar school houses erected in this town, both of which were consumed by fire. The surface of this town, except on the river, is uneven, hard and rocky. The intervalles and flats are easy and fertile. *Burnside* and *Cow* mountain are considerable elevations. Connecticut river washes the east side of this town. Its other waters are, *Cutler's Mill* brook, on which mills have been erected, and *Burnside* brook, on which also, are mill privileges. There is a small village in the northeast corner of the town, containing the county buildings, several offices, stores, &c. At this village is a good bridge across Connecticut river. There is another bridge, connecting this town with Lancaster, near the south east corner. There are here two stores, one tavern, one grain mill, two saw mills, and one fulling mill. *Statistics of 1840.*—Horses, 126; cattle, 794; sheep, 1,235; swine, 446; wheat, bn. 957; barley, 78; oats, 6,285; buck wheat, 1,774; In. corn, 905; potatoes, 25,025; hay, tons, 1,415; sugar, lbs. 11,800; wool, 2,081. Population, 470.

GUILFORD, a post town in the south part of Windham county, is in lat. 42° 47' and long. 4° 26', and is bounded north

GUILFORD.

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by Brattleborough, east by Vernon, south by Leyden, Massachusetts, and west by Halifax. It lies 50 miles south from Windsor, 31 east from Bennington. It was chartered April 2, 1754, to fifty-four proprietors, principally of Massachusetts, and contained 23,040 acres. When granted the town was a perfect wilderness, yet by the charter, the grantees were to hold their first meeting for the choice of officers, &c. on the first of May, 1754, and on the first Tuesday of March ever afterwards. It seems the town was first organized by and under the very grant itself. Power was given to the grantees to transact the business of the town as a majority should see fit, subject only to the control of the parliament of England. This little enterprising band, composed of Samuel Hunt, John Chandler, David Field, Elijah Williams, Micah Rice, Ira Carpenter and others, having little to fear from the nominal power of parliament, in the wilderness of Vermont, assumed the title, which was virtually created by their charter, of a little independent republic. By the records of their first meetings, they appear to have been governed by certain committees, chosen for the purpose of surveying the lands, laying roads, drawing the shares or lots, taxing the rights, &c.; but their greatest object was to procure and encourage settlers. Their meetings were held at Greenfield, Northfield, Hinsdale or Brattleboro', until 1765, when their first meeting was held at Guilford. There was a condition which, if not performed, went to defeat the grant. The grantees were to settle, clear and cultivate, in five years, five acres for every 50 in said township. Although much time and money were spent in making roads and clearing lands, yet on the 20th of March, 1764, the grantees by a special committee chosen, petitioned the governor of N. H. for a confirmation of their grant, and an extension of the time, stating that the intervention of an Indian war had made it impracticable for them to fulfil the conditions of the charter. Their prayer was granted and the time for settling the town, extended to the first of January, 1766. From the time the charter was confirmed in 1764, the town began to be rapidly settled by emigrants from Massachusetts and other New-England states. Through the policy of the original proprietors, the first settlers began upon lots of 50 acres, in order to fulfil the condition of the grant. So rapid was the increase of population, that the town soon became the largest in the state as to numbers. Yet there was not a single village in the township, or rath-

er the whole township was a village—all the hills and vallies were smoking with huts. By the charter 350 acres were called a share, and all the proprietors shared alike. The reservations in the charter consisted of "one whole share to the society in England for propagating the gospel in foreign parts—one to the first settled minister of the gospel—and one whole share for a glebe, for the ministry of the church of England, as by law established." The governor was not unmindful of his own interest. He reserved 500 acres to be located by itself, for his own. The town was laid out into 50 and 100 acre lots. The public rights were fairly located, but *that* of the royal governor fell upon the only mountain in town, which still bears the name of authority upon the map—"Gov. Mountain." Although no reservation was made in the grant for the use of schools, yet one whole share was located for that purpose. That was a just and generous act of the proprietors, but it was not the same liberality that governed them, when they located, sold and settled one whole tier of hundred acre lots north beyond the extent of their charter. That was the case and the same is held by the town to this day. "All the pine trees suitable for masting the royal Navy" were reserved to his Majesty. This shews the attention the English nation paid to the Navy. One hundred miles from the ocean, where no such timber grew, was that reservation made. What has been related, with a little "proclamation money," was the price of the charter.

The first land was cleared in 1758 by the Hon. Jona. Hunt and Elisha Hunt, on the farm now occupied by the Rev. Asa Haynes. The first settlement was made by Micah Rice and family, in September, 1761, on the place now occupied by Jeremiah Greenleaf, Esq. Mr. R.'s widow died in 1832, aged 95 years, and his oldest son is now living here, aged 80. Soon after followed Jonathan Bigelow, John Barney, Daniel Lynds, Wm. Bigelow, Ebenezer Goodenough, Paul Chase, Thomas Cutler, John Shepardson, and others. They came into town by the way of Broad brook. Beginning at the mouth of that stream on Connecticut river in Vernon, and passing up on its banks, they found their way into Guilford.—That was then the only road, and even *that* was impassable with teams. The first settlers had either to boil or pound their corn, or go 15 miles to mill with a grist upon their backs. It appears, by what records can be found, that the town was wholly governed by a set of officers

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chosen annually by the people under their charter, until the 19th May, 1772, when the inhabitants, at a "district meeting assembled" in the district of Guilford, voted, that Guilford was in the county of Cumberland and province of New York, and chose officers of the town, agreeably to the laws of that province. At that meeting a record was first made in a regular town book, which was purchased by the original proprietors some years before. By that record it appears, John Shepardsen was chosen "district clerk, John Barney supervisor," &c., and the meeting was then adjourned to a day after the annual meeting by the charter. Having renounced their charter, and there being no government which really exercised authority over them, they continued to legislate for themselves, and tradition says that good justice was done, yet one principle of the charter was still adhered to, none but proprietors, or those who held under them, had a right to rule, or vote in their meetings. Thus was this little republic regulated by a town meeting, which was adjourned from time to time, without interruption from abroad, or contentions at home, until the year 1776. Then the town was beset with violent tories and Yorkers on the one side, and brave whigs and New-states-men on the other. The whigs, united with those opposed to the claims of the state of New-York, that and the succeeding year, outvoted the tories and the Yorkers. In 1776 the town voted to pay the expenses of Benjamin Carpenter, their delegate to the Westminster Convention in 1775. They voted to raise nine soldiers for the continental army, equip them with arms and powder, give them a bounty of £4 "bay money," by a tax upon the inhabitants of the town, and it was done. They also resolved, that "no man should vote for town officers, who was not qualified according to the direction of the Continental Congress." Under that resolution, their committee, chosen for the purpose, excluded tories from the polls, *vi et armis*, and the poor, if *qualified*, participated in the government. The title of the town as belonging to the state of New York, was left out of the records. To give some idea of the laws passed by the old republic of Guilford, we will quote the following, passed the next year, 1777. "Voted, not to let any person vote in this meeting, but such as have 40 pounds real or personal estate. Voted, John Barney and Benjamin Carpenter be a committee to go to Windsor, in June next, to hear the report of the agent sent to Congress concerning a new state. Voted, that any

person who shall, for the future, pretend to hold lands by *bush fence possession*, shall be dealt with by the town, as a breaker of the peace of the town, and a riotous person, &c. Attest—

"ELIJAH WELCH, T. Clerk.

They further chose a committee to establish the price of labor, all kinds of produce, goods, wares and merchandise. The report of the committee was adopted as the law of the town. All the articles mentioned were a legal tender for debts, with a penalty of the article sold, or the value thereof, with costs. The punishment of offenders was various, such as "*beech seal*," fines, &c., but the most disgraceful of all was to be compelled to embrace the *Liberty Pole*, with both arms, the time specified by the committee of inspection, or judges. There was again an entire change of politics in 1778. It appears by the records, that a warrant and notification for a town meeting was sent from the "Council of Bennington," and a meeting held upon the same, when it was "*Voted*, not to act agreeable to said warrant," and the meeting was dissolved. In 1779, after doing the customary town business, "*Voted*, Lovell Bullock, Timothy Root, and Henry Sherburn, a committee to defend the town against the pretended state of Vermont, and to represent the town in County Committee." "Henry Sherburn, Elliot and Hezekiah Stowell," all violent "Yorkers, were chosen to take special care of the powder and lead, and other town stores"—and the meeting adjourned to the next year. In 1780, a like meeting was held. There is the following record for 1781. "Then all the people met together that means to stand in opposition against the pretended state of Vermont, and acted on the following articles, viz." *Among others see the following*—"Voted, to defend themselves against the insults of the pretended state of Vermont. Voted, Peter Briggs and William Bullock for a Committee to send to Charlestown Convention.† Voted, that Hezekiah Stowell keep the names of those that are against said pretended state," &c. Also, May, 1782. "Then the people met in general, and voted to stand against the pretended state of Vermont, until the decision of Congress be known, with *lives and fortunes*. Voted, to receive the instructions which came from New York, &c. Voted, and chose Henry Evens, Daniel Ashcraft and Nathan Fitch, to forbid the constable acting." These appear not to be regular meetings of the

* See Slade's Vermont State Papers, p. 108.

† State Papers, p. 128; also Part 2d, p. 60.

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town, but of the Yorkers, who had gotten possession of the town books and stores by a majority of votes in 1778. They in turn excluded the other party from the polls, by force of arms. Frequently a company of armed Yorkers came from Brattleboro', to stand sentry at their meetings, when skirmishes ensued and hostile shots were exchanged. The whigs and Vermonters also kept up their system of government by regular and stated meetings, but their records were lost, as will be related hereafter. In their turn they sent hostile scouting parties to Brattleboro', to the assistance of their friends in that town.* The Vermonters had a sheriff, in Guilford, and their party, also, had a constable, who continued to collect taxes for the support of their cause. Those friendly to the new state paid without compulsion, while the property of the Yorkers, both real and personal, was sold at the post for taxes. For that reason the committee before mentioned was chosen "to forbid the constable acting", and their doings were spread upon the records of the town, by proclamation, as follows. "To all the officers of the civil authority under the pretended state of Vermont. You are hereby forbid to proceed against any person, or persons, that owns the jurisdiction of the state of New York, according to what is recommended in a handbill, by Congress, bearing date June 2, 1780, and we do hereby forbid the constable venduing those numbers hereby given him," (referring to certain lots on the plan of the town) "and we hereby forbid you on your apparel.

"HENRY EVENS,†
 "DAN ASHCRAFT, } Committee
 "NATHAN FITCH, } Chosen.

"A true record,—Attest,

"SAMUEL BIXBY, Town Clerk."

The Yorkers, held a like meeting in 1783, April 29, and adjourned to their annual meeting in 1784.‡ From 1778 to 1783 the town was governed, principally, by their former laws. Both parties had their committees, and the Yorkers, although in authority, could not govern the town, yet, in connection with the Tories, prevented any thing being done under the direction and government of the new state.‡ In this state of things, Ethan Allen arrived in town, at the head of 100 Green Mountain Boys; but, as we have already given an account of his proclamation and proceedings, we shall not repeat them here. § From 1784 to 1791 no

records of the proceedings of the town are preserved. In March of the year last mentioned, the town was, for the first time, duly organized under the constitution and laws of Vermont. William Bigelow was chosen town clerk, who came peaceably into possession of the papers and records of the town, that were to be found. Tradition says, that during the seven years in which no records were kept, both parties held public and private meetings, but that it was a perfect rule of anarchy. The Yorkers, although they had the town books, dared not record their proceedings in them, and both parties kept secret their own records. During this confusion and jealousy, one party stole the records of the other, and hid them, together with their own, many deeds and proprietors' papers, under the earth in the pound, in order to conceal them from the other. There they lay, through some sad misfortune, until they were totally spoiled. When discovered and dug up, they could not be read. During that time, the Yorkers, having been so closely pursued by the military and civil authority of Vermont, and their property mostly confiscated, fled to the state of New York, and settled upon the grants made by that state to the New York sufferers. Almost a whole township, now called Bainbridge, was first settled by emigrants from Guilford. This accounts for the so rapid decrease of the population from 1784. While the town was independent of any power superior to the town meeting assembled, refugees from the neighboring states flocked into it, but when the law came, they fled. The violent Yorkers found but little peace under the energetic and persevering measures of the states' attorney of Windham county. To him the people of Guilford are indebted for the establishment of law and order, without the effusion of blood, and the dispersion of the riotous. Migrations have not only been westward, but northward and eastward. Most of the towns, in the northern and middle parts of this state, contain inhabitants from old Guilford. Although the town has decreased in population, it has increased in opulence. Where one farmer now occupies and improves, formerly lived half a dozen, or more, and you now see one respectable dwelling instead of as many log huts. Since 1791, there has been nothing remarkable in the history of the town. From that time the inhabitants have supported the character of free and independent farmers, very jealous of their rights, and for many years noted for their strong prepossessions in favor of the political

* See part 2d, p. 78. † H. Evens was one of the five who were banished and their property confiscated.

‡ See Gov. Chittenden's remonstrance, &c. same page 182. § See part second, page 77.

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school of Jefferson. The Hon. Benjamin Carpenter was a member of the first convention in Vermont, held at Dorset in 1776. In those trying times with the brave sons of the Green Mountains, when they had not only to oppose the powerful state of New York, the claims of New Hampshire and Massachusetts, the Tories and Yorkers at home, and the menacing threats of Congress abroad, but the power of his majesty's legions in war, that brave patriot, with an allowance of three days' provisions upon his back, would cross the Green Mountains on foot by marked trees, to attend the legislature at Bennington, for the purpose of devising ways and means of defence against all the enemies of the state. As delegate to the assembly, as a member of the council, and lieutenant governor of the state, he deservedly holds a conspicuous place in the early history of the same.* Hon. John Shepardson, born in 1718, was a firm patriot of the revolution, and held the offices of judge of the supreme court and member of the council for several years: Died, in 1798. Hon. Samuel Shepardson, born in 1757, was a useful member of society, and had the honor of sitting as a member of the council for several years. Died, in 1813. Hon. William Bigelow, one of the first settlers of the town, and always a father to the people, born in 1751, was a judge of the county court, which office he held with good reputation to himself, and died in 1814. Among the early settlers of the town, since 1796, might be mentioned the names of the Hon. Royal Tyler, Hon. James Elliot, Hon. Richard Whitney, Hon. Micah Townshend, Hon. Henry Seymour, Hon. Gilbert Denison, Hon. Samuel Elliot, Hon. John Noyes,

* Upon a large white marble tomb stone, in the west part of Guilford, is the following inscription, inserted here for its curiosity.

SACRED TO THE MEMORY

OF THE

Hon. BENJ. CARPENTER, Esq.

Born in Rehoboth, Mass. A. D. 1726.

A magistrate in Rhode-Island in A. D. 1764.

A public teacher of righteousness,

An able advocate to his last for Democracy,

And the equal rights of man.

Removed to this town, A. D. 1770,

Was a field officer in the Revolutionary war,

A founder of the first constitution and government of Vermont.

A Councillor of Censors, in A. D. 1783,

A member of the Council, and Lieut Governor of the State in A. D. 1779,

A firm professor of Christianity in the Baptist church 50 years. Left this world

And 146 persons of lineal posterity, March 29th 1804,

Aged 78 years 10 months and 12 days,

with a strong

Mind and full faith of a more

Glorious state hereafter.

Stature about six feet—weight 200.

Death had no terror.

and many others of less note, who are mostly identified with the history of the state, but who have since removed from the town. Guilford was the birth place of Henry Denison, Esq., the late poet of Georgia, and also of the Rev. Wilbur Fisk, late president of the Wesleyan University at Middletown, Ct. The Rev. Royal Girley was the first settled minister in Guilford. He was of the Congregational order, and received the right of land reserved and located for that purpose. He was settled in the year 1775, and died soon after. He was a young man of science, and much respected for his pious and amiable deportment. The second of the same order was the Rev. Henry Williams, who was settled in 1779. Rev. Bunker Gay, of Hinsdale, preached his ordination sermon. His text was "*Death in the pot.*" He was a violent Yorker, and when the town submitted to the state authority he left with his political brethren. The third, the Rev. Elijah Wollage, was settled in 1794, and dismissed in 1799. The next of that order was the Rev. Jason Chamberlain. He was settled in 1807, and in 1811, being elected professor of languages in the University of Vermont, by his own request, was dismissed. Afterwards the Rev. Elijah Wollage returned, and was received for a time, but dismissed in 1818. An Episcopal church was formed in the east parish, November 8, 1818, by the name of *Christ's Church*; and on the 8th of May, 1819, the Congregational society voted to unite with the Episcopal society, and invited their minister, the Rev. A. L. Baury, to perform divine service at their meeting house, in the centre of the town, half of the time. An Episcopal society was formed for that purpose, and a union of the two societies was effected, and so has continued to this time. The Episcopal ministers who have officiated here are the Rev. Alfred A. Baury from September, 1820 to May, 1822, the Rev. Samuel B. Shaw from 1822 to 1831; the Rev. Jacob Pearson from 1832 to 1836; the Rev. Luman Foote from 1837 to 1838; and the Rev. John B. Pratt from 1838 to 1841. The present minister is the Rev. Frederick A. Wadleigh. This church consists of about 50 communicants. The Baptists are the most numerous sect. Among the Elders who have had the care of churches in this town, may be mentioned the names of Willis, Hicks, Snowe, Allen, Packard, Leland, Bucklin, Wilson, Lamb, and Bruce. Their present minister is Elder Milo Frarey. The Methodists have several classes and there are two ministers of this order in town, the Rev. Asa

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Haynes and the Rev. John L. Smith. There is also a Universalist society, and their present minister is the Rev. Wm. N. Barber. There were formerly a very few of the fanatical sect called Dorrites here.* The Congregationalists built the first meeting house, the Baptists the second. The Episcopal church was built in 1817, the Universalist house in 1836, and the Methodist chapel more recently. The town has a neat and convenient town house, built in 1821, and situated near the centre. There is a village at the west, one at the south, one at the east, and one at the centre of the town; the two latter much the largest, yet neither containing more than 25 or 30 houses. Elijah Welch was the first physician that settled in town. Simon Stevens and Dana Hyde were the principal physicians for about 40 years. The town is divided into 15 school districts, in each of which is a school house, convenient for teaching from 50 to 100 scholars. In them schools are kept most of the year. The public school fund has amounted to \$210 yearly, arising from the lands. From that sum, deducting the rents of the propagation rights, \$79, taken up by the original proprietors, leaves \$131 still annually in the treasury, arising from the glebe and school lots. The funds of the latter were nearly lost to the town as follows: In 1777, the town voted to sell those lands, amounting to 350 acres, and put the money at interest for the benefit of schools. It was done, and the price of the lands received in specie, which was lent by the whig administration of the town, in 1777, to the recruiting officers, for the purpose of tempting the soldier to enlist into the service of his country. In payment of the loans continental bills were received, which turned out to be of little or no value. Small as is the fund, it has been of great use to the town. In 1818, a "Female Bible and Prayer Book Society" was established for the purpose of distributing those precious books to the poor of the town, and at the same time a Sunday school was formed, both of which are under the care of the Episcopal church. A library, consisting of about 300 volumes, styled "Guilford Social Library," established in 1790, was sold at auction, by vote of the society, in 1818. The air and climate are remarkably wholesome. The oldest people in the town cannot remember any remarkable season of mortality. Most of the inhabitants live to a good old age, and the physicians remark that not one to a hundred die annually. It is not uncommon in town for people to live to

the age of 100 years. The earth is naturally covered with a deep, strong and rich soil, with a sufficient mixture of earths to make it warm, and, at the same time, to prevent its leaching. The hills make excellent sweet pastures, and the low lands are fine for tillage. The farms consist of from one to five hundred acres each, which keep, through the year, from 10 to 40 cows, with other stock sufficient for the concerns of the farm. Of late years, some of the more wise have turned their attention to the raising of sheep, for which the hills are best suited. The land is naturally covered with maple, hemlock, walnut, beech, birch, ash, bass, butternut, and elm. A few trees of black oak, locust and sycamore, are found. The most useful tree is the maple. The farmers take as much pains to keep and preserve an orchard of maple as of apple trees, from which each manufactures from 50 to 2000 lbs. of sugar annually, mostly for their own use, but when plenty, it becomes an article of commerce. Beside butter and cheese, for which the town is famous, it produces beef, pork, poultry and the finest of horses for market. All kinds of grain are raised, but not in plenty for the market. Wheat does not grow well upon the old fields. Apples, peaches, plums, pears, cherries and quinces grow and bear well. As the stumps and roots decay, some of the hills are washed by the rains and have decreased in value. The prudent farmers have set out shade trees upon their hills, which not only preserve the grass from the scorching rays of the sun, but the roots prevent the ground from washing. Free from rocks, stumps and shrubs, most of the hills and vallies are smooth on the surface, and in summer present to the eye a most delightful scenery. The town is hilly but not mountainous. Except "Gov. Mt." nearly the whole is subject to cultivation. East mountain, so called, extending the whole length of the town north and south, is the largest hill. It is about one mile wide, descending gradually to the east and south, and, except the bluffs on the west side, is cleared and cultivated. Even the west side is covered with excellent timber. On the top of this hill live some of the greatest dairy-farmers in town. There, you may literally see "cattle upon a thousand hills." The rocks are principally mica slate, lying in tight ledges, interspersed with strata of quartz, and running from north to south. Impure garnets are plenty in the mica slate, and some good specimens of rock crystal have been found. Quartz and schorl, in various mixtures, are found

* See part second, page 202.

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some having all the appearance of lava. On the east side of the town is a range of argillaceous slate, which is manufactured into roof and writing slate. Rolled rocks of granite, from huge masses to small pebbles, appear on almost every lot. On some few lots is limestone, and on others, bog iron ore, but neither sufficiently pure and plenty for manufacture. A slight volcanic eruption is said to have taken place here a few years ago upon the farm of Mr. Maxwell. Gneiss and hornblende slate, with those above mentioned, compose the principal rocks in town. Rocks of all kinds are not sufficiently plenty for the use of the farmer, without much expense. In the banks is found good sand, and in the low lands as pure clay, perhaps, as any in Vermont. On the farm of Maj. E. Houghton, is a mineral spring, which is the resort of invalids, troubled with scrofulous and other cutaneous eruptions. It is situated in a piece of low marshy ground, and the water is impregnated with magnesia, lime, sulphur and iron. The bubbles that arise in the spring, on meeting a torch held upon the surface, will explode with a flame. Green River is a rapid stream, running south through the west part of the township, and Broad brook a smaller stream running east through the north part. There are two small streams, branches of Broad brook, which run north, one through the centre, and the other at the foot of the east mountain on the west side, and empty into Broad brook. On both the former are fine mill privileges, and water sufficient at all seasons of the year. The banks and bottom of these streams are clean, the waters limpid, and they contain trout. Eels and suckers are found in most of the ponds, but not in plenty. There are now in town 1 paper mill, 1 extensive tannery, 2 comb factories, 2 oil mills, 2 grist mills, 6 saw mills, 1 clothier's works and carding machine, 4 stores, and 4 taverns. A large cotton factory, situated in the east village, was burnt in 1820. *Statistics of 1840.*—Horses, 255; cattle, 2,312; sheep, 2,949; swine, 790; wheat, bu. 920; barley, 1,940; oats, 4,630; rye, 690; b. wheat, 30; Ind. corn, 9,028; potatoes, 31,795; hay, tons, 3,438; sugar, lbs. 21,555; wool, 6,472. Population, 1525. c. s. & j. b. p.

HALIFAX, a post town in the south part of Windham county, is in lat. 42° 47' and long. 4° 20', and is bounded north by Marlborough, east by Guilford, south by Colerain, Mass., and west by Whitingham. It lies 25 miles east from Bennington, and 9 southwest from Brattleborough, and was chartered May 11, 1750. The settlement was commenced in 1761, by

Abner Rice from Worcester county, Mass. He was joined by others from Colerain and Pelham, Mass. in 1763. The time the town was organized is not precisely known, but was about the year 1770. The first town clerk, of whom any information has been obtained, was Samuel Woodard, and the first representatives, Hubbell Wells, and Edward Harris. The religious denominations are Congregationalists and Baptists. The former church was organized in 1778. The Congregational meeting house was built in 1782, and the Baptist meeting house in 1804. The first settled minister was the Rev. David Goodall of the Congregational order. He was settled in 1781, and dismissed in 1796. The Rev. Jesse Edson was ordained over the same church November 23, 1796, and died December 14, 1805. He was succeeded by the Rev. Thomas H. Wood, the present minister, who was ordained September 17, 1806. The minister of the Baptist church is Elder Samuel Fish. The years 1799, 1800, 1817, and 1831, were seasons of special religious revivals. About the year 1812, a Mr. Rice died here aged 112 years. The years 1805, 1812, and '13, were the periods of the most remarkable mortality. This township is watered by North and Green river. The former runs through the western and southern part, and the latter through the northeastern. They are both large and commodious mill streams, and the mill privileges are numerous. In the branch of North river, on the farm of Henry Niles, is a succession of cascades extending about 100 rods. The falls are from 15 to 20 feet each, and are overlooked by the projecting rocks on the right in ascending the stream. The place is visited by the curious, and the scene, which presents itself, is rugged, wild and romantic. The surface of the township is uneven, but there are no mountains worthy of notice. On the margin of North river is a cavern, called *Woodard's Cave* or *Dun's Den*. It is 25 feet in length, 5 in width and the same in height. The sides and top are of solid rock. This is also a place of resort for the curious. The soil is generally of a good quality, well adapted to the production of grass, and much attention is devoted to the raising of cattle and the keeping of dairies. The people are mostly industrious and wealthy. The timber is principally beech, maple, birch, ash, hemlock, and spruce. The town is divided into 14 school districts with as many school houses. At the centre is an elegant brick school house, 42 by 24 feet on the ground, in which the languages and higher branches of literature have usually been

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taught during most of the year. There has also been a school for young ladies, in which, besides the higher branches of English education, were taught drawing, painting and music. There are, in town, 1 grist and 8 saw mills, 2 stores, and 2 tanneries. *Statistics of 1840.*—Horses, 257; cattle, 2,417; sheep, 5,051; swine, 1,000; wheat, bu. 1,335; barley, 1,294; oats, 6,678; rye, 695; buck wheat, 587; Ind. corn, 5,420; potatoes, 52,825; hay, tons, 4,149; sugar, lbs. 46,660; wool, 9,875. Population, 1,399.

HANCOCK, a post town in the southeastern part of Addison county, is in lat. 43° 55' and long. 4° 8', and is bounded northerly by Granville, and a part of Ripton, easterly by Rochester, southerly by Goshen, and westerly by Goshen and Ripton. It lies 30 miles southwest from Montpelier, and 40 northwest from Windsor; was granted November 7, 1780, and chartered July 31, 1781, to Samuel Wilcox and his associates. The settlement was commenced in the year 1788, by Joseph Butts, from Canterbury, Con., Daniel Clafin, from New Salem, and John Bellows, from Dalton, Mass., with their families. Several young men also began improvements the same year, among whom were Zenas Robbins, and Levi Darling. Ebenezer, son of Daniel Clafin, was the first child born here. The town was organized June 18, 1792. Zenas Robbins was the first town clerk, and Daniel Clafin, John Bellows, and James Clafin, the first selectmen. The town was first represented by Esaias Butts, in the year 1800. The religious denominations are Methodists, Universalists, Congregationalists and Baptists. The Congregational church was organized July 20, 1804, but has never had a settled minister. Emerson's branch of White river, the sixth branch of the same, and Leciest-ter river, all rise near the southwest corner of this township. Emerson's branch runs southeasterly and joins White river in Rochester, the sixth branch runs northeasterly and falls into White river, near the northeast corner of this town, and Leciest-ter river runs westerly into Otter creek. Middlebury river also heads in the western part of the township. These streams afford several very good mill privileges. The whole of the township lies upon the Green Mountains, but the principal ridge is on the western side. The surface of the township is high and broken, and but a small portion of it suitable for tillage; it, however, produces good grass. The timber, on the highest summits, is mostly spruce and hemlock, on other parts principally beech, maple,

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&c. There are 1 grist mill, 2 saw mills, 1 fulling mill, and 1 carding machine, and 2 stores. *Statistics of 1840.*—Horses, 96; cattle, 544; sheep, 1,942; swine, 274; wheat, bu. 567; oats, 2,994; buck wheat, 80; Ind. corn, 396; potatoes, 16,960; hay, tons, 1,090; sugar, lbs. 10,600; wool, 4,890. Population, 455.

HARDWICK, a post town in the western part of Caledonia county, is in lat. 44° 31' and long. 4° 39', and is bounded northeast by Greensborough, southeast by Walden, southwest by Monroe, and northwest by Wolcott. It lies 21 miles northeast from Montpelier, and 73 north from Windsor. It was granted November 7, 1780, and chartered August 19, 1781, to Danforth Keyes and his associates, containing 23040 acres. Soon after the township was chartered, a man, by the name of Safford, made a beginning here, but was soon discouraged and left the place. About the year 1790, the first permanent settlement was made by several families of the name of Norris from New-Hampshire. Mr. Porter Page came in about the same time, and also a number of families, by the name of Sabin, soon after, among whom was Mr. Gideon Sabin, whose wife was the mother of 26 children. The town was organized in 1795. Paul Spooner was first town clerk, and also the first Representative. Jonas Bundy Hardwick, son of Nathaniel Norris was the first child born in town. The Baptists formed the first religious society soon after the settlement commenced and settled Elder Amos Tuttle, who continued their minister several years. In 1804, a Congregational church was organized, which, at first, consisted of 12 members. By the year 1810, it had increased to 30 members, when there was a powerful awakening, and 70 more were added to their number. In 1811, they settled the Rev. Nathaniel Rawson, jr., who continued their pastor a little more than six years, and was dismissed. On the 3d of January, 1822, the Rev. Jacob N. Loomis was ordained over this church, which, then consisted of about 130 members. He was dismissed, about 1830, on account of ill health, and in 1833 the Rev. Robert Page was settled, who continued a little more than two years, and was succeeded by the Rev. Chester Wright who was installed in June, 1837, and died, much lamented, April 16, 1840, aged 63. The Rev. Austin O. Hubbard, the present minister, was installed in July, 1841. The Baptist church, having lost its organization after the dismission of Elder Tuttle, was re-organized in 1831, and in 1839 settled Elder Aaron Angier, their present minister. There are

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3 meeting houses; the first built in 1820 by Samuel French.* This is called the south meeting house. The second was built in 1825, one and a half mile to the northeast of this, by the Congregationalists, and is called the North meeting house. The third house was erected by the Baptists in 1840, at a place called Stevensville. The surface of the township is pleasantly diversified with large swells and vales, but no part of it is mountainous. The principal stream is the river Lamoille, which enters the township from Greensborough, and taking a circuitous course, passes through it in a westerly direction into Wolcott. This and several of its tributaries furnish a number of excellent mill privileges. The timber is a mixture of maple, birch, hemlock, spruce, &c. The rocks are granite, gray limesone, slate and quartz, with fine specimens of rock crystals. The soil is good. There are three small villages. The oldest, called the Street, or Hazen's Road, is situated on high land near the north line of the town; the second, called Stevensville, is on the river Lamoille, in the eastern part; and the third and largest, called Lamoilleville, on the same river in the southwest part of the town. Each of these villages contains a number of mechanics' shops, stores, &c., and the two latter possess excellent water privileges, on which mills and other machinery are erected. There is a mineral spring in the south part of the town, which is a place of considerable resort, and is found to be very efficacious, particularly in cutaneous affections. There are in town 11 school districts, 456 scholars, 5 stores, 2 grist and 5 saw mills, &c. *Statistics of 1840.* Horses, 338; cattle, 2,236; sheep, 8,309; swine 806; wheat, bush. 2,053; barley, 771; oats, 21,608; Ind. corn, 1,893; potatoes, 67,265; hay, tons, 4,931; sugar, pounds, 60,843; wool, 17,714. Population, 1,354.

HARRIS' GORE, a tract of land containing 6,020 acres, lying in the southwest corner of Caledonia county, is bounded northwest by Marshfield and Goshen Gore, northeast by Groton, and southwest by Orange. It was granted February 25, 1781, and chartered to Edward Harris, October 30, 1801. It is mountainous, and contained, in 1840, only 16 inhabitants. Gunner's branch originates in this gore, and unites with Stevens' branch in Barre.

HARTFORD, a post town in Windsor county, is in lat. 43° 40' and lon. 4° 37', and bounded north by Norwich, east by Connecticut river, which separates it from Leb-

anon, N. H., south by Hartland, and west by Pomfret. It lies 14 miles north from Windsor, and 42 southeast from Montpelier. It was chartered July 4, 1761, to 60 proprietors, and contains about 46 square miles. The first settlers were Elijah, Solomon, and Benajah Strong. They emigrated from Lebanon, Ct., and came into this township with their families in 1764. The next year they were joined in the settlement by 12 other families. The town was organized March 8, 1768, and Elijah Strong was the first town clerk. In 1775, Amos Robinson was chosen to go to Westminster, and Stephen Tilden was delegate to the Convention holden at Westminster, January 15, 1777, which declared the independence of Vermont. The religious denominations are Presbyterians, Congregationalists, Methodists, Baptists, Universalists, and Christians. The three former have regular churches. The Rev. Thomas Gross was the first settled minister. He was settled over the Congregational church June 7, 1786, and dismissed in February, 1808. The Rev. Austin Hazen was settled by the same church May 28, 1812. The epidemic of 1812 and '13 was very mortal, and carried off about 60 persons. Joseph Marsh, Esq., a very prominent man in the early history of Vermont, was a resident of this town. He was born at Lebanon, Conn., in January, 1725, and removed to this township in 1772. In 1775 he was chosen a delegate from the county of Cumberland to the Convention of the province of New York, on matters relating to the revolution—much of the eastern part of Vermont, at this period, acknowledging the authority of that province. He was a member of the convention which formed the first constitution of Vermont, in 1777; the first Lieut. Governor of the state, which office he held for several years in succession, and was some years chief judge of the county court for the county of Windsor. He was many years a professor of the Christian religion, and died here in January, 1810, in the enjoyment of its hopes and consolations, at the advanced age of 85 years. This town was the birth place of the Rev. James Marsh, grandson of the preceding and late Pres. and Prof. in the University of Vermont. This township is watered by White and Quechee rivers, which are the only streams of consequence. White river enters the township near the northwest corner, and falls into the Connecticut about the middle of the eastern boundary, and Quechee river runs through the south part. They both afford very valuable privileges for mills and other machinery driven by water,

* For an account of the fanatics who for a while occupied this house see part second, page 204.

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particularly at the places called White river village and Quechee village. The surface of the town is broken, but the soil is rich and warm, and produces good grass and grain. The gulf formed by the passage of Quechee river through a considerable hill, is a curiosity, and is about one mile below Quechee village. There are evident appearances of there having been a considerable pond here, which was emptied by the wearing down of the channel. The timber is principally white pine, beech, maple and birch. There are several small villages in town, the largest are White river village and Quechee village. White river village is pleasantly situated on the banks of White river, about one mile from its mouth, and contains a store, tavern, post office, two lawyers' offices, and a variety of mills, machinery, and mechanics' shops. A large cotton factory situated in this village, was burnt a few years since. The river is here crossed by a handsome bridge. Quechee village is situated around a considerable fall in Otta-Quechee river, about five miles from its mouth, and contains a handsome meeting house, two stores, a tavern, a woollen factory, mills, and a great variety of mechanics' shops. At the mouth of White river is a small villa, and the landing place for goods from Connecticut river, which is here crossed by a bridge, called Lyman's bridge. There are in town 17 school districts and school houses, 1 oil, 3 grist, 7 saw, and 3, fulling mills, 3 woollen factories, 6 stores, 3 taverns, 3 tanneries. *Statistics of 1840.*—Horses, 448; cattle, 3,184; sheep, 16,281; swine, 1,476; wheat, bus. 4,507; oats, 27,718; rye, 2,632; buck-wheat, 5,012; Indian corn, 19,753; potatoes, 59,050; hay, tons, 5,687; sugar, lbs. 11,400; wool, 39,915. Population, 2,194.

HARTLAND, a post town in the eastern part of Windsor county, is in lat. 43° 34', and long. 4° 34', and is bounded north by Hartford, east by Plainfield, N. H., from which it is separated by Connecticut river, south by Windsor, and west by Woodstock. This township lies 50 miles southeasterly from Montpelier, 62 northeast from Bennington, 100 from Boston. It was chartered July 10, 1761, by the name of Hertford, containing 25,350 acres. The charter was confirmed by New York in 1766. The name was altered to Hartland June 15, 1782. The settlement of the township was commenced in May, 1763, by Timothy Lull, from Dummerston, in this state. At this time there were no inhabitants on Connecticut river between Charlestown, then No. 4, and Hartland. A few families had, however, settled in

Newbury, about 40 miles to the north of this place. Mr. L. moved into the town in the following manner. Having purchased a log canoe, he proceeded in that up Connecticut river, with his furniture and family, consisting of a wife and four children. He arrived at the mouth of a considerable brook in Hartland, where he landed his family, tied his canoe, and, breaking a junk bottle in the presence of his little family, named the stream *Lull's brook*, by which name it has ever since been known. He proceeded up the brook about a mile, to a log hut which had been previously erected, near the place now called Sumner's village. Here he spent his days and died at the advanced age of 81 years. His son Timothy, lately deceased, was the first child born in town. He was born in December, 1764, on which occasion the midwife was drawn by the father from Charlestown, upon the ice, a distance of 23 miles, upon a handsled. Mr. Lull had to suffer many privations and hardships for several years; but possessing a strong constitution and a vigorous mind, he overcame all obstacles, accumulated a handsome property, lived respected, and died generally lamented. The first settlers of the township were mostly emigrants from Massachusetts and Connecticut. The town was organized in 1767, and Zadock Wright was first town clerk. The religious denominations are Christians, Universalists, Congregationalists, and Baptists. There are four houses of public worship, one erected in 1788, another in 1822, and two others have since been erected. Elder Timothy Grow was for many years the minister of the Baptist church. The present minister of the Congregational church is the Rev. John F. Griswold; of the Methodist, David Wilcox; and of the Universalists, Joseph D. Pierce. This a rich farming township, and its surface is pleasantly diversified with hills and vallies. Connecticut river washes the eastern boundary, and at Quechee Falls, on this stream, are several mills, situated on the Hartland side. Quechee river runs across the northeast corner, and Lull's brook through the southern part of the town, and afford some of the best mill privileges in the state. On the lands of David H. Sumner, Esq. has recently been discovered a valuable bed of paint. It is abundant and of an excellent quality. The town is divided into 20 school districts, in each of which is a school house. Here are 2 small villages, 2 grist, 7 saw, 1 clapboard and 3 fulling mills, 2 woollen factories, 2 tanneries, 2 taverns and 4 stores. *Statistics of 1840.*—Horses, 454; cattle,

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2,786; sheep, 16,323; swine, 1,583; wheat bus. 4,403; oats, 38,663; rye, 4,637; buck-wheat, 3,664; Indian corn, 9,127; potatoes, 79,395; hay, tons, 7,211; sugar, lbs. 25,280; wool, 48,575. Population, 2,341.

HARWICH.—Name altered to Mount Tabor. See *Mount Tabor*.

HAZEN'S ROAD.—See *Peacham*.

HAZEN'S NOTCH, a remarkable notch in the mountain between Lowell and Montgomery through which Hazen's Road passed.

HERTFORD.—This name was altered to Hartland, June 15, 1782. See *Hartland*.

HIGHGATE, a township in the northwest corner of Franklin county, is in lat. 44° 58', and long. 3° 59', and is bounded north by Dun's Patent in Canada, east by Franklin, south by Swanton and Sheldon, and west by Missisco bay, which separates it from the township of Alburgh. It lies 33 miles north from Burlington, and 54 northwesterly from Montpelier, and was chartered August 17, 1763. The first settlement of this township was, by Germans, mostly soldiers who had served in the British army during the revolution. John Hilliker, and John Waggoner were the first settlers. John Sax built the first saw mill and the first grist mill. The township was first regularly surveyed in 1805 by John Johnson, Esq. The religious denominations are Episcopalians, Methodists and Congregationalists. The Episcopal church, called *St. John's Church*, has been successively under the charge of the Rev. Anson B. Hard, the Rev. John T. Sabine, and the Rev. Charles Fay. This church has 62 communicants and a very neat house of worship. The Congregational church was organized, October 28, 1811. It now consists of 50 members. Their house of worship, erected in 1812, was finished in 1824. The Rev. Phineas Kingsley was settled Oct. 20, 1819, and dismissed Sept. 22, 1829, but now preaches here a part of the time. The Missisco river enters this township from Sheldon, and, after running some distance in the south part of it, passes into Swanton, and, then taking a circuitous course of several miles, returns into Highgate, and pursuing a northwesterly course falls into Missisco bay. About six miles above Swanton falls, is a fall in the river of about 40 feet, affording some excellent mill privileges. Rock river is in the north part of the township, and has on it one saw mill. The soil is mostly sandy, and covered with pine, except along the course of the Missisco river, where the timber is hemlock, ash, &c., and in the

southwest corner, which constitutes a part of what is called *Hog Island*, and is marshy. Bog iron ore is found in this town in great abundance, and has been worked to some extent. There are here 6 school districts and schoolhouses, two grist, and 8 saw mills, 1 woolen factory, and 5 stores. *Statistics of 1840.*—Horses, 386; cattle, 2,074; sheep, 8,182; swine, 857; wheat, bus. 5,032; barley, 114; oats, 11,559; rye, 1,458; buckwheat, 1,119; Indian corn, 6,762; potatoes, 39,845; hay, tons, 4,347; sugar, lbs. 12,108; wool, 18,874. Population, 2,292.

HINESBURGH, a post township in the south part of Chittenden County, containing 36 square miles, the lines running due north and south, and east and west, in lat. 44° 19' and long. 3° 57', and is bounded north by Shelburne, St. George and Richmond, east by Huntington and Starksborough, south by Starksborough and Monkton, and west by Charlotte. It lies 12 miles southeast from Burlington, and 26 west from Montpelier. This township was chartered June 21, 1762, to Abel Hine and his associates. The first inhabitants were a Mr. Isaac Lawrence, and family from Canaan, Connecticut, whose wife said that she lived ten months without seeing the face of any other woman, and that, at one time, the family lived for some time on dried pumpkins, without any other food whatever. This family came here before the revolutionary war, and also Mr. Daniel Chaffy, who was here for a short time; they both left when the war commenced. Mr. Lawrence returned in 1783. Messrs. Jacob Meacham, Amos Andrews and Hezekiah Tuttle came in 1784. In 1785, Mr. George McEwen with his family, Mr. Eliphaz and George Steele came without families and spent the summer. The first child born in town was a son of Jacob Meacham on the first day of April, 1785; he was named Hine, in reference to the name of the town. All the hardships and privations were suffered which usually occur in the commencement of new settlements. The first town meeting was warned by Isaac Tichenor, Esq., of Bennington, and holden on the 3d Tuesday of March, 1787. Josiah Steele was moderator, and Elisha Berben first town clerk. Elisha Barber, George McEwen and Elisha Steele, selectmen; Jacob Meacham, first constable; Lemuel Bostwick was the first representative; Wm. B. Marsh, the first physician. The Congregational church was formed in the year 1789, with 12 members; the Rev. Reuben Parmelee was ordained as pastor in 1791, and dismissed in 1795. From

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this time until 1818 the church was destitute of a stated pastor. On the 30th of September of this year, the Rev. Otto S. Hoyt was ordained, and remained their pastor until the 9th of February, 1832, when he was dismissed. From 1832 to October, 1837, the church was supplied by the labors of the Rev. Mason Knapen, succeeded by the Rev. Brainerd Kent. On the 8th of February, 1838, the Rev. Otto S. Hoyt was installed over this church, and is their present pastor. The church was first formed of 12 members; the present number is 132. The Baptist church was formed in the year 1810 with 17 members; the present number is 133. Among the Elders who have at different periods labored in this church, may be mentioned the names of Peter Chase, the late Alanson L. Covell, Wm. Arthur and John Ide. At present they are enjoying the labors of Elder Wakeman G. Johnson. The Episcopal Methodists were formed into a class in the year 1799, consisting of 6 or 7 members. They have been supplied by different circuit preachers, and have now a flourishing church which consists of 118 members; the Rev. Mr. Hurlburt is their present minister. There are also in the town a class of Protestant Methodists and a society of Free-Will Baptists. A literary society was formed here in 1810, which was incorporated in 1822, and has a respectable library. An academy was also incorporated in 1822, which affords good advantages for receiving a thorough academical education, being sustained by a competent superintendent. The first Sabbath school was established about 1820, and the present average attendance of Sabbath school scholars at the different churches is about 200. There is in the north part of the town a high ridge of rough land called Prichard mountain. The west part has generally a level surface, interspersed with small hillocks. In the eastern part the land is hilly and broken, containing, however, a good share of feasible, fertile and valuable land. The forest consisted of hard timber generally. There were some beaver meadows, one of which contained between one and two hundred acres, from which the first settlers derived much benefit. The principal streams are Lewis creek, Laplot river and Pond brook. Lewis creek enters the town from Monkton, and takes a westerly course through the southwest part of the town. On this stream, in the year 1790, Mr. Nathan Leavenworth, one of the early settlers, built a saw mill and a grist mill. This mill is in the bounds of Charlotte. Before it was built the inhabitants

were obliged to go to Winooski falls at Burlington, or to Vergennes, for their grinding. The river Laplot rises in the southeastern part of the town, and takes a northwesterly course, running through a rich tract of intervale, which is from one half to a mile and a half in width and about four and a half in length. This land is not excelled for fertility and beauty by any in the county. Pond brook is the outlet of a natural pond which lies in the north part of the town, and in Williston and joins into the river Laplot a little northwest of the village. On this stream are several sites for water power, which are now occupied by a furnace, carding machine, fulling mill, machine shop, saw mill and two woollen factories. There are two other streams which take their rise in the eastern part of the town, one falling into the river Laplot and the other, called Calkins', or Trout brook, emptying into Lewis creek in the north part of Monkton. On this stream is a saw mill; on the former, called Baldwin brook, are a number of good sites for water power; where are now a saw mill, a shingle machine, a grist mill with 3 runs of stones, a bark mill and a machine for rolling leather. The village is in the central part of the town. It has three pleasant houses for public worship, belonging to the three principal denominations. The Congregational and Methodist being of brick and the Baptist of wood. An academy, on an elevated site in the centre of the village, a vestry built by the Congregational church, a village school house, 38 dwelling houses, 6 dry goods stores, 1 leather and shoe store, one tavern, &c. This town has been somewhat remarkable for the health of its inhabitants, especially in the first settlement. It however suffered severely from the epidemic of 1813, which carried off about 40 heads of families. The oldest persons who have died in this town were Mr. Andrew Burrill and his wife. He lived to the age of 96 years and 3 months, she lived to the age of 95 years and 8 months, having lived together over 70 years. Mr. Andrew Burrill was the only original proprietor who settled on his own right of land. The oldest person now living is the widow of Mr. Benjamin Berto, who is about 100 years old. There are 14 school districts, with a school house in each. The number of scholars, in the year 1840, between the ages of 4 18 years, was 598. The public money accruing from rents on public lands, school taxes, and other funds, amounted to \$645.84, which gave a dividend on each scholar of \$1.08. *Statistics of 1840.* Horses, 209; cattle, 2,162; sheep, 8,998;

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swine, 1,083; wheat, bus. 2,020; oats, 7,758; rye, 1,120; buckwheat, 393; Indian corn, 6,888; potatoes, 27,605; hay, tons, 4,639; sugar, lbs. 14,170; wool, 16,336. Population, 1,682. E. B.

HINSDALE.—Name altered to Vernon, October 31, 1802. See *Vernon*.

Hog-Island, is partly in Swanton and partly in Highgate, and lies between the mouth of the Missisco river and a creek, which makes out of the same, and unites with McQuam bay in Swanton. It has Missisco bay on the west, and contains 10 or 12 square miles. Much of the land is low and marshy.

HOLLAND, a township in the northeast corner of Orleans county, is in lat. 44° 58' and long. 4° 55', and is bounded north by Barnston and Stanstead, Can., east by Norton, south by Morgan, and west by Derby. It lies 56 miles northeast from Montpelier, and 61 north from Newbury. It was granted March 8, 1787, and chartered to Timothy Andrus and associates, October 26, 1789, containing 36 square miles. The settlement was commenced in 1800 by Edmund Elliot and Joseph Cowal. The town was organized March 14, 1805, and Eber Robinson was first town clerk. The surface is uneven but not mountainous. Mount John in the southeast corner, is the only elevation which deserves the name of mountain. The soil is excellent for grass, and produces good crops of wheat, oats, barley, potatoes, &c. There is a large pond situated in the northeast part, and several small ponds. The streams are small, part flowing north into Canada, and part south into Clyde river. The timber consists of maple, beech, birch spruce, hemlock, &c. On the 2nd of July 1833, this town was visited by a violent tornado. It commenced on Salem pond in Salem, and passed over this town in a northeasterly direction. It was from half to three quarters of a mile wide, and it prostrated and scattered nearly all the trees, fences and buildings in its course. It crossed the outlet of Norton pond and passed into Canada, and its course could be traced through the forests nearly to Connecticut river. *Statistics of 1840.*—Horses, 92; cattle, 602; sheep, 1,033; swine, 392; wheat, bus. 1,844; barley, 829; oats, 4,180; buckwheat, 1,150; Ind. corn, 151; potatoes, 14,510; hay, tons, 1,281; sugar, lbs. 20,685; wool, 2,400. Population, 605.

HOPKINSVILLE.—Name altered to Kirby in the fall of 1807. See *Kirby*.

HOOSIC RIVER, is formed in Pownal, and runs northwesterly into the township of Hoosic, N. Y., where it receives the river Walloomscoik from Shaftsbury and

Bennington, and, taking a westerly course falls into the Hudson near Stillwater. Its whole length is about 40 miles, and it receives the waters from 182 square miles in Vermont.

HOSMER'S PONDS. See *Craftsbury*.

HUBBARDTON, a post town in the northwestern part of Rutland county, is in lat. 43° 43' and long. 3° 50', and is bounded north by Sudbury, east by Pittsford, south by Castleton, and west by Benson. It lies 50 miles southwest from Montpelier, and 50 north from Bennington. It was chartered June 15, 1764, to Isaac Searls, Esq. and his associates, and now contains about 18,000 acres. But in consequence of prior charters and surveys some of the north part was held by Sudbury and a gore on the east by Pittsford.* It derived its name from Thomas Hubbard, a large proprietor in the town. The settlement was commenced in the spring of 1774, by Uriah Hickok and William Trowbirdge, with their families from Norfolk, Connecticut. Elizabeth, daughter of Mrs. Hickok, was born August 1st of this year, and died in September, 1776. This was the first birth and the first death in town. In 1775, Samuel Churchill, William Spaulding, Abdial Webster, Benjamin Hickok, Jesse Churchill, Benajah Boardman and John Seleck moved their families here. These nine families constituted the whole population when the American army, under Gen. St. Clair, evacuated Ticonderoga, July 6, 1777. On the same day a party of Indians and Tories, under a Captain Sherwood, came upon the inhabitants of this township, and made prisoners of Benjamin and Uriah Hickok, with their families, and two young men, by the names of Keeler and Kellogg. Gen. St. Clair, with his army, passed through this town the same day, and left Cols. Warner, Hale and Francis with their regiments as a rear guard. They encamped on the farm of John Seleck, Esq. near the spot where the Baptist meeting house now stands. On the following night Benjamin Hickok, with his own and the family of Uriah Hickok, left their homes, the women and children on foot, in order to escape from the danger. When they arrived at the deserted farm of Justin Hickok, in Castleton, they stopped for the remainder of the night, expecting to pursue their journey in the morning in company with

* The towns in the south part of the state being surveyed first, and most of them being surveyed larger than the charter limits, several of the towns in this vicinity were consequently contracted to less than what their charters allowed, and one whole town, chartered by the name of Dunbar, was entirely run out, there being no place left to locate it.

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Col. Bellow's regiment, which was encamped there. The Colonel had but just commenced his march in the morning, when, hearing firing at Hubbardton, he marched back to the assistance of his companions, leaving these unfortunate families, to pursue their flight, unprotected and alone, but not arriving till after the battle had been decided, he retreated back to Castleton. On the morning of the 7th of July, Warner sent a detachment of about 300 men, a distance of two miles, to assist Mr. S. Churchill in getting away his family. They had just begun their march, on their return, when the battle commenced.* Hearing the firing, they pushed forward as fast as possible to the assistance of their companions. Two of Mr. Churchill's sons, John and Silas, accompanied the detachment, and were in the engagement. Silas was taken prisoner, and John made his escape, and fled back to his former residence, as did also the rest of the family, after having two of the horses wounded on which the women rode.† Here they were surprised, and all taken prisoners by Sherwood and his party, who had been lurking on the hills east of the town during the action. The men and boys were taken away, the house plundered, and the women ordered by Sherwood to leave it that it might be set on fire. Upon this one of the young women exclaimed, "You have taken away our men and provisions, and can you be so cruel as to burn our house!" and so saying she fainted and fell. In consequence of this and the tears and entreaties of others the house was spared; but that was of little use without food or clothing. Sherwood suspecting that Mr. Churchill had flour concealed, ordered the Indians to take him into the woods and burn him unless he informed them where it was. They bound him to a tree, piled wood around him, questioning and threatening him, but as he steadfastly denied having concealed any, Sherwood at length ordered them to desist and unbind him. Mr. Churchill and his sons, John, Silas and Ezekiel, together with Messrs. Hickok, Keeler, and Kellogg were carried to Ticonderoga, while William Churchill, who was lame, and the females and younger parts of the families were left to take care of themselves. A part of these made their way to Castleton; but Mr. Churchill's family consisting of four women, two boys, one of whom was lame, and two small chil-

dren, made their way, some on foot and some on horseback, over the Green Mountains to No. 4, thence to Springfield, Mass. and thence over the mountain to Sheffield, Con. the place from which they emigrated. The men, who were detained as prisoners at Ticonderoga, were confined during the night and required to labor during the day. Messrs. Churchill and Hickok, who were employed in boating wood, watched their opportunity, landed on the eastern shore and made their escape. They proceeded to Hubbardton but found the town deserted and desolate. In Mr. Hickok's house was the putrid carcase of a dead man, and numerous others, with fragments of fire arms and clothing, were scattered in profusion in the vicinity of the battle ground.* They left this heart-sickening scene, and went in pursuit of their families. Mr. Hickok found his family at Castleton. But Mr. Churchill hearing nothing of his, proceeded to the south, and was at length so happy as to find them arrived safely in Connecticut. The other prisoners, mentioned, remained at Ticonderoga till October, when they were retaken by Col. Brown. In 1780, most of the families which had been driven off had returned, but few additions were made to the settlement till 1783. In 1784, the people turned out and collected the bones which had been bleaching for seven years upon the battle ground, and buried them. The first framed barn was built in Hubbardton by S. Churchill, in 1785, the boards for it being brought 12½ miles on an ox-sled. The first framed house was built by Nathan Rumsey, in 1787, and the first saw mill, the same year, by Josiah Churchill. The first grist and second saw mill were built by Nathan Rumsey, in 1789. The town was organized in March, 1785, and David Hickok was the first town clerk, and Janna Churchill the first representative, and the first justice of the peace. The religious denominations are Baptists, Congregationalists, Methodists and Universalists. The Baptist church was formed Sept. 24, 1787. Elder Nathaniel Culver was their minister from 1787, to 1792. Elder Nathan Dana was settled in 1798, and was regarded as their first settled minister. He continued the pastor till 1808. Elder Joseph W. Sawyer commenced preaching here in November, 1815, was settled Nov. 6, 1816, and continued till March, 1822. Since that time this church has been supplied by temporary engage-

* For an account of the Battle, see part 2, page 42.

† It is said that as Mrs. Churchill's horse staggered from the effect of the wound, she jumped from his back, exclaiming, "I wish I had a gun, I'd give them what they want."

* Mrs. Boardman with two children, was in the house which was surrounded by the contending armies, during the battle, and, as there was no cellar, she took shelter under the bed where she remained till the battle was over.

HUBBARDTON.

HUBBARDTON RIVER.

HUNTINGTON.

ments. The present minister is Elder Barna Allen. This church consists of 68 members. Their meeting house is in the southeast part of the town, and was built in 1800. The Congregational church was formed in 1782. The Rev. Ithames Hibbard took charge of it in 1798, and continued pastor till his death, which happened March 2, 1802. After him the Rev. John Ransom and Rev. Samuel Cheever, labored here for some time. In 1818, this society erected a meeting house. In 1819, the Rev. Sherman Kellogg was settled and continued till 1823. The Rev. Horatio Flagg was settled January 24, 1828, and dismissed June 10, 1834. The present minister is the Rev. William C. Denison. Their meeting house being burnt in January, 1837, a new one was erected in 1838. The church consists of 104 members. The Methodist church, organized in 1809, consists of about 45 members, and is supplied by circuit preachers. A society of Universalists was formed here in 1830, by the Rev. Kittridge Haven, who has preached here a portion of the time. This town has suffered much by fire, many valuable buildings having been destroyed within a few years. The Rev. Ithamer Hibbard, who served as chaplain in the army during the revolution, came to this town in 1798, was a pious and useful man, and something of a poet. He was the father of 20 children, some of whom became useful ministers of the gospel. Doct. Theophilus Flagg came here in 1791, and was the first physician. He was useful and much respected, and died Sept. 5, 1807, leaving a handsome property. James Whelpley, Esq. came here in 1787. He held many important offices, and was with all a great hunter. He died in 1838, aged 90 years. Nathan Rumsey, Esq. was a soldier of the revolution, came here in 1785, was the first merchant, and built the first grist mill. He joined the army during the last war, was taken prisoner at fort Erie and carried to Halifax, where he died in 1815. Seven persons have died here between 90 and 100 years old, and 18 between 80 and 90. There are now living 27 between 70 and 80, and 10 between 80 and 90.* The dysentery prevailed in 1803, and the epidemic of 1813 carried off about 40, mostly in the vigor of manhood. The surface of the township is uneven and somewhat mountainous. The most noted summit is Mount Zion, so named by Ethan Allen. There are several natural

ponds, the largest of which is Gregory's pond, which is about 3 miles long and 1 broad, and lies partly in Sudbury. At its outlet are excellent mill privileges owned by Gideon Horton, Esq., on which are a saw and grist mill, trip-hammer, woollen factory, &c., surrounded by a pleasant little village. Berbe's pond, situated a mile north west of the centre of the town, is $1\frac{1}{2}$ mile long and a mile wide, and discharges south into lake Bombazine, and on the outlet are a saw and grist mill, carding machine, &c., owned by S. B. Walker, Esq. Round pond, Marsh pond, Keeler's pond, Black pond, and Howland's pond, are smaller. The latter discharges into Otter creek. The town is well timbered with hard wood and hemlock. Pine was formerly plenty, but is now become scarce. The soil is various. The eastern part is hard pan covered with rich muck, is very good for grass and spring crops, and when new frequently yielded 40 bushels of wheat to the acre. Good Indian corn is raised on this land, when manured and then ridged by turning two furrows together. In other parts the soil is slaty loam, and better suited to the production of winter grain. Plaster, ashes and lime are here found to be very beneficial for manures. Springs of good water are common, and in the south west part of the town is a spring said to possess precisely the same properties as the celebrated springs in Clarendon, and around it are large quantities of calcareous tufa. Iron ore, and silver and zinc are said to have been found in small quantities, and the geological character of the township is very interesting, but has not been very scientifically examined. There are in town 9 school districts and school houses, 3 ministers, 1 physician, 1 temperance tavern, 2 stores, 2 tanneries, 1 small woollen factory, 2 grist and 9 saw mills, &c. *Statistics of 1840.*—Horses, 155; cattle, 869; sheep, 10,516; swine, 411; wheat, bus. 1,849; oats, 2,023; rye, 1,411; buckwheat, 45; Indian corn, 2,957; potatoes, 12,800; hay, tons, 3,138; sugar, lbs. 5,557; wool, 29,862. Population, 719. A. C.

HUBBARDTON RIVER, rises from several small ponds in Sudbury, runs southwesterly through Gregory's pond in Hubbardton, through Benson, and falls into the head of East bay in West-Haven. In its course it affords several very good mill privileges. Its length is about 20 miles.

HUNGERFORD. Name altered to Sheldon, November 8, 1792. *See Sheldon.*

HUNTINGTON, a post town in the southeast part of Chittenden county, is in lat. $44^{\circ} 20'$ and long. $4^{\circ} 5'$, and is bounded north by Bolton and a part of Rich-

* Mr. Amos Churchill, who furnished the materials for this article, and much other interesting matter which we regret that we are obliged to omit for the want of room, is the only person living in town who was here in the beginning of 1783.

HUNTINGTON RIVER.

HYDEPARK.

mond, east by Duxbury and Fayston, south by Avery's and Buel's gores, and west by Starksborough and Hinesburgh. It lies 20 miles west from Montpelier, and 15 southeast from Burlington. It was chartered June 7, 1763, to Edward Burling and others, by the name of New-Huntington, and originally contained 36 square miles. October 27, 1794, the northwesterly part of this township was annexed to Richmond, and the northeasterly part of Bolton; and at the same time the north part of Avery's and Buel's gores were added to New-Huntington. In October, 1795, the name was altered to Huntington. The settlement of this township was commenced in March, 1786, by Jehiel Johns and Elisha Bradley, emigrants from Manchester and Sunderland in this state. The town was organized in March, 1790, and Charles Brewster was first town clerk. It was first represented in 1791, by Jehiel Johns. The religious denominations are Freewill Baptists, Baptists and Methodists, and a union meeting house was built here in 1836. Peleg, son of Elisha Bradley, born Nov. 6, 1806, was the first child born in town. Huntington river is the principal stream. It affords some convenient mill privileges. The surface of the township is very uneven, consisting of high mountains and deep gullies. That celebrated summit of the Green Mountains, called *Camel's Hump*, is in the east part of this township. There are some farms which produce tolerable crops, but the soil is, in most parts, rocky and poor. Timber, such as is common to the mountain towns. There are here 8 school districts, 6 good school houses, 1 grist and 5 saw mills. *Statistics of 1840.*—Horses, 210; cattle, 1,671; sheep, 4,721; swine, 977; wheat, bu. 1,423; oats, 5,649; rye, 47; buck wheat, 921; Ind. corn, 3,615; potatoes, 24,987; hay, tons, 2,596; sugar, lbs. 19,480; wool, 7,738. Population, 914.

HUNTINGTON RIVER rises in Lincoln, runs through Starksborough and Huntington, and joins Winooski river in Richmond. This is a very rapid stream, with a gravel or stoney bottom, especially after it arrives within two or three miles of the Winooski. Its length is about 20 miles.

HUNTSBURGH. See *Franklin*.

HYDEPARK, a post and shire town in the centre of Lamoille county, is in lat. 44° 37' and long. 4° 26', and is bounded north-

erly by Eden, easterly by Wolcott and a small part of Craftsbury, southerly by Morristown, and westerly by Johnson and a part of Belvidere. It lies 27 miles north from Montpelier, and 32 northeast from Burlington; was granted November 6, 1780, and chartered to Jedediah Hyde and others August 27, 1781, containing 23,040 acres. The original grantees were mostly residents of Norwich, Conn., and men who had distinguished themselves in the land or naval service during the revolutionary war. The settlement of this township was commenced by John McDaniel, Esq., who removed his family here July 4, 1787. He emigrated from Northfield, N. H. At this time the nearest settlements were at Johnson on the west, and at Cabot on the east; the former distant 8 miles and the latter about 26. The intervening country was a perfect wilderness, with no road or guide except marked trees. Through this wilderness Mr. McDaniel conveyed his family from Cabot to Hydepark. He was joined the same season by Wm. Norton, from New York; and those two families were the first and only families who wintered in town that year. The next spring they were joined by Capt. Jedediah Hyde, Peter Martin, Jabez Fitch, Esq., and sons, and Ephraim Garvin. These pioneers were followed in a few years by Aaron Keeler, Truman Sawyer, Oliver Noyes, and Hon. N. P. Sawyer and others. The first settlers experienced all the privations usual in a wilderness. They were under the necessity of getting their milling done at Cambridge, 18 miles distant. The town was named Hyde's Park in the charter, as a compliment to Capt. Jedediah Hyde, the first named in that instrument. Jedediah Hyde, Jr., was a proprietor, and surveyed the town, and drew the charter with a pen; a part in German text, with red ink, the rest with black ink, and all the names in imitation of print; it is on parchment, and is a literary curiosity. It is now in the possession of Major R. B. Hyde, a son of the first named. The town was organized in 1791. Jabez Fitch was first town clerk, and Hon. N. P. Sawyer was first representative. The most numerous sect of Christians are Methodists. They are supplied with preaching by their circuit ministers. There are Universalists, Christian brethren, a few Baptists and Congregationalists. These have occasional preaching. There is a town house near the centre of the town, commodiously finished for a house of worship, and is occupied for that purpose. The town is healthy. Jabez Perkins Hyde was the first male born in town, and Dia-

* Mr. Johns came to Manchester in 1767, was at Burlington with a detachment of Montgomery's army in 1775, and died at Huntington in Aug. 1840, aged 85 years. He was a man of vigorous mind, remarkably retentive memory, and was more intimately acquainted with the early history of the western part of the state, than any other person I have ever met with.

HYDEPARK.

IRA.

dama Hyde the first female. David Parker was the first adult male who died in town. He came to his death by a log rolling over him, in the 19th year of the settlement. John McDaniel, Esq., the first settler, was a man of strong mind and passions, with a retentive memory, social and friendly, and was esteemed a father to the first settlers. His house was always open to the poor and wayfaring man. He died respected and lamented, Aug. 12th, 1834, in his 86th year. Capt Jedediah Hyde, the first name on the charter, and who was principally instrumental in obtaining it, had the command of a company in the revolution, and served in the navy. He was quite noted for his politeness and easy address. He died May 29th, 1822, in his 86th year. Jabez Fitch, Esq., one of the grantees, was a man of sound mind and extensive reading. He served two campaigns in the old French war, held a commission in the two first campaigns of the revolution, was captured by the British on Long Island, and endured an eighteen months' imprisonment, and on board of several of their prison ships experienced sad examples of the tender mercies of that magnanimous nation. He kept a narrative while a prisoner, and a diary of events for nearly 40 years. Both are now in the possession of his descendants. He wrote moral and political essays for the periodicals of the day, and occasionally ascended mount Parnassus. He contracted aboard those prison ships a scurvy, which resulted in an ulcer on his leg, which continued as long as he lived. He died Feb. 29, 1812, aged 75. At the time this town was settled, there resided here an Indian and squaw, named Joe and Molly, who were of much service to the first settlers.* This town is watered by the Lamoille, which crosses the southeast and southwest corners. Green river has its source from several ponds in the northeast part of the township. The streams from these ponds take a southerly course until united,—when the stream takes the name of Green river, veers to the east, and discharges its waters into the Lamoille in Wolcott. There are several saw mills on this river and its branches, in this town. Little North branch has its source in Eden, crosses the northwest corner of the town, enters Johnson, and, after meandering about 2 miles, veers to the east again, enters Hydepark, and passes over falls where there is an excellent place for ma-

chinery. Here is a saw mill, as well as at the northwest corner. There is Mill brook and Carter brook in this town, beside those above named, on which there are saw mills and other machinery. There are a variety of soils,—the rich bottoms on the rivers, the elevated sandy plains, the rich loam, and clay or marly lands. The plain lands are best adapted to the culture of corn, rye, and oats; the clay and loam to wheat and grass. The timber is mostly hard wood, yet there are all the varieties usual in the vicinity. There is pine in the vicinity of the ponds, and formerly in other parts of the town. Cedar and tamarack swamps abound; fir is scattered over all the moist lands. There is a ridge of high lands running northerly and southerly through the town. The growth is maple, beech, birch, elm, scattering trees, and clusters of hemlock, and spruce. This ridge of land is excellent for wheat, and sure of a crop. There are in the northeast part of the town 12 ponds, containing from $\frac{1}{2}$ to 50 acres, beside several smaller ones. Trout have been abundant in most of them, but are becoming more scarce. Some of them have names, such as Great pond, Clear pond, George's pond, Zack's pond, Mud pond, &c. Hydepark village is situated in the southwest part of the town, on a beautiful elevated plain; it contains a court house, jail, and jail house, built in 1836, by the inhabitants of the town, at which time it became the seat of justice for Lamoille county. The village contains 2 stores, 3 taverns, 1 physician, and 1 Thompsonian, several mechanics' shops, and 20 dwelling houses. The town originally contained moose, deer, bears, beaver, otter, and many smaller quadrupeds. The rivers and ponds were plentifully stored with fish, mostly trout and suckers. There are 8 saw mills in town, one rake factory, at which there have been finished 120 doz. in a year, and a scythe-snath factory. There are 12 school districts, and 10 school houses. *Statistics of 1840.*—Horses, 201; cattle, 1,384; sheep, 3,239; swine, 864; wheat, bush. 2,185; barley, 53; oats, 8,747; rye, 191; buckwheat, 305; Ind. corn, 3,533; potatoes, 47,816; hay, tons, 2,501; sugar, lbs. 32,570; wool, 7,132. Population, 1,080. A. H.

INDIAN RIVER is a small stream, which rises in Rupert, runs through the corner of Pawlet, and unites with Pawlet river in Granville, N. Y. Another small stream of this name rises in Essex and falls into Colchester bay in Colchester.

IRA, a post town in the central part of Rutland county, is in lat. 43° 33', and long. 3° 55', and is bounded east by Rut-

* We were furnished by Dr. Huntoon with several interesting anecdotes respecting Joe and Molly, which we are obliged to omit for want of room. Some account of them has, however, been given in part second, p. 203.

IRASBURGH.

ISLE LA MOTTE.

JAMAICA.

land and Clarendon, south by Tinmouth, southwest by Middletown, and west by Poultney and Castleton. It is of a triangular form, running to a point towards the north, and is 47 miles north from Bennington, and 32 west from Windsor. This town was organized May 31, 1779, and Isaac Clark was the first town clerk, and also the first representative, chosen the same year. The Baptist church is the only one in town. It was organized in 1783, and Elder Thomas Skeels was settled over it on the 25th of December of this year. He was succeeded by Elder Amasa Brown, who was settled February 23, 1786, and dismissed January 30, 1787. December 3, 1801, Elder Joseph Carpenter was ordained over this church, and continued his connection with it till March 7, 1816. He was succeeded by Elder Wm. McCuller, who preached here from April 29, 1815, till the fall of 1819. Elder Lyman Glazier was ordained over the church July 11, 1822. The present minister is Elder Elias Hurlbut. They erected a brick meeting house, which was completed in 1822. The number of members belonging to this church in 1724 was 140. A very powerful awakening commenced here in November, 1808, and continued through the winter, in consequence of which 225 were added to the Baptist church. Sixteen or 17 persons died here of the epidemic of 1813. This township is considerably mountainous. *Bird's* mountain, in the north part, is high and abrupt. Ira brook rises in the south part, runs northeasterly, and joins Furnace brook in Clarendon. Castleton river crosses the township in a westerly direction. Mill privileges not very good. There are, in town, 5 school districts and school houses, 2 saw mills and 1 tavern. *Statistics of 1840.*—Horses, 125; cattle, 703; sheep, 6,864; swine, 290; wheat, bus. 580; barley, 56; oats, 2,305; rye, 579; Indian corn, 2,305; potatoes, 11,510; hay, tons, 1,167; sugar, lbs. 10,962; wool, 17,247. Population, 430.

IRASBURGH, a post and shire town in the centre of Orleans county, is in lat. 44° 48', and long. 4° 42', and is bounded northerly by Orleans, easterly by Barton and a small part of Brownington, southerly by Albany, and westerly by Lowell, Coventry gore and a part of Newport. It lies 40 miles northeasterly from Montpelier, was chartered, to Ira Allen and his associates, February 23, 1781, and contains 23,040 acres. Ira Allen was the principal proprietor, and from him the township derives its name. The settlement of the township was commenced a little previous to the year 1800. The

town was organized March 12, 1803, and Samuel Conant was the first town clerk. In this town was found the shirt of mail described in part second, page 208. The surface of this township is somewhat diversified with gentle hills and valleys. The soil is easy to cultivate, and, in general, produces good crops. Black river passes through the township in a northeasterly direction, receiving a number of small streams, but its current is generally moderate, and it affords but few mill privileges. Barton river just touches upon the eastern corner. Nearly in the centre of the township is a small village, containing a court house and jail, 2 meeting houses, 2 taverns, 2 stores, and several mechanics' shops. *Statistics of 1840.*—Horses, 264; cattle, 1,781; sheep, 3,430; swine, 689; wheat, bus. 2,129; barley, 336; oats, 9,120; rye, 162; buckwheat, 1,299; Indian corn, 1,529; potatoes, 39,808; hay, tons, 2,847; sugar, lbs. 25,961; wool, 7,847. Population, 971.

ISLE LA MOTTE, an island and post town in the western part of Grand Isle county, in lat. 44° 57' and long. 3° 41', is bounded on all sides by lake Champlain. It is situated 28 miles northwesterly from Burlington, and 13 nearly west from St. Albans. It was chartered by this name to Benjamin Wait and others, October 27, 1789, containing 4,620 acres. The name was altered to Vineyard, November 1, 1802, and again altered to Isle la Motte, Nov. 6, 1830. The settlement of this town was commenced about the year 1785. Among the early settlers were Ebenezer Hyde, Enoch Hall, Wm. Blanchard and Ichabod Fitch. The town was organized about the year 1790. Abraham Knapp was the first town clerk, and Nathaniel Wales the first representative. There are no streams on the island. A marsh extends across it from east to west, which abounds with excellent cedar. The rocks are limestone, and are extensively quarried for building, for which purpose they answer well. The town is divided into two school districts, with a school house in each. *Statistics of 1840.* Horses, 231; cattle, 444; sheep, 1,367; swine, 304; wheat, bus. 3,318; barley, 37; oats, 4,616; rye, 140; buckwheat, 1,415; Ind. corn, 1,717; potatoes, 6,787; hay, tons, 505; sugar, lbs. 3,141; wool, 2,763. Population, 435.

JACKSON'S GORE, united to a part of Ludlow, and formed into a township by the name of Mount Holly, Oct. 31, 1792.

JAMAICA, a post township in the northwestern part of Windham county, is in lat. 43° 5' and long. 4° 11', and is bounded north by Windham and Londonderry,

JAMAICA.

JAY.

JERICHO.

east by Acton and Townshend, south by Wardsborough, and west by a part of Stratton and a part of Winhall. It lies 26 miles northeast from Bennington and 32 southwest from Windsor. It was chartered November 7, 1780, to Samuel Fletcher and his associates, and contains 29,017 acres. The settlement was commenced about the same time by William, Benjamin and Caleb Howard and others from Mendon, Mass., and other towns in its vicinity. The town was organized Sept. 3, 1781. William H. Church was first town clerk, and Silas Howard, first representative. The religious denominations are Congregationalists and Baptists. The number, in each church, is about the same, and they have each a large and convenient house for public worship; that of the former, erected in 1808, and that of the latter, in 1817. The Rev. John Stoddard was the first settled minister. He was settled over the Congregational church in 1795, and dismissed in 1798. In September, 1815, the Rev. Philip Spaulding was installed over this church, and dismissed in 1829. The Rev. Samuel Kingsbury was settled May 19, 1831, and dismissed March 5, 1833. Elder Simeon Coombs was installed over the Baptist church in 1803, and left the town in 1806. In 1812, there was a revival of religion, and about 60 were added to the two churches. West river passes through this township, and, together with its tributaries, affords numerous and excellent mill privileges. The surface of the township is broken and mountainous, and the elevations rocky, but the soil is, in general, warm and productive. A range of primitive limestone passes through the township, from which lime is manufactured in the eastern part, where there is a fine locality of dolomite. It is granular, flexible, and of a snow white color. In a vein of the dolomite is found the micaceous oxyde of iron. It is brilliant, fine grained, and the particles are separated by rubbing between the fingers. The principal village is situated near the centre of the township, and contains two meeting-houses, and several stores, mills and manufacturing establishments. They are situated on Bald Mountain brook, near its junction with West river. There are, in town, ten school districts, 3 grist and 8 saw mills, 2 tanneries and 6 stores. *Statistics of 1840.*—Horses, 246; cattle, 2,655; sheep, 5,059; swine, 901; wheat, bus. 1,226; barley, 124; oats, 7,632; rye, 2,073; buck-wheat, 1,118; Indian corn, 5,152; potatoes, 44,680; hay, tons, 3,531; sugar, lbs. 13,531; wool, 8,111. Population, 1,586.

JAY, a township in the northwest corner of Orleans county, is in lat. $44^{\circ} 57'$ and long. $4^{\circ} 25'$, and is bounded north by Sutton, Can., east by Troy, south by Westfield and west by Richford. It lies 50 miles north from Montpelier, and the same distance northeast from Burlington. This township was granted March 13, 1780, and originally called Carthage. It was chartered to Gov. Thomas Chittenden, November 7, 1792, by its present name, and contains 23,040 acres. Previous to the late war with Great Britain, five or six families had settled in this township, but during the war they nearly all left it. A few families have since returned, and the settlement has been slowly advancing. The eastern part of this township is handsome level land, and the soil good. The west line runs nearly its whole length on a very high mountain. A number of small streams rise among the mountains in the western part, and, running easterly, unite before they leave the township, affording several very good mill privileges. Jay Peak is a very lofty summit of the western range of the Green Mountains, situated in the southwest corner of the township, and partly in Montgomery, Westfield and Richford. *Statistics of 1840.*—Horses, 49; cattle, 315; sheep, 795; swine, 200; wheat, bus. 885; barley, 53; oats, 1,743; rye, 123; buck-wheat, 421; Indian corn, 268; potatoes, 10,680; hay, tons, 650; sugar, lbs. 8,095; wool, 1,112. Population, 308.

JERICHO, a post town in the central part of Chittenden county, is in lat. $44^{\circ} 27'$, and long. $4^{\circ} 4'$, and is bounded northerly by Underhill, east by Bolton, south by Richmond, southwest by Williston, from which it is separated by Winoski river, and westerly by Essex. It lies 12 miles east from Burlington, and 26 northwest from Montpelier. It was chartered to Gov. Thomas Chittenden, and associates, June 8th, 1763, and originally contained 27,110 acres. Since that time a small part of Bolton has been annexed to it, and a new township formed from this and Williston, by the name of Richmond. The settlement of Jericho was commenced in 1774, by Messrs. Messenger, Rood and Brown, with their families, from the western part of Massachusetts; but the settlement was mostly abandoned during the revolution. Mr. Brown settled on the flats near Underhill, on what is now called Brown's river. He, with his family, consisting of a wife, a daughter, and two sons, remained unmolested during the fore part of the revolutionary war, and had made such improvement on his land as to raise most of the

JERICHO.

JERICHO.

necessaries of life. In the autumn of 1780 the family was surprised and made prisoners by a party of Indians. At the time, a young man by the name of Olds was in the house, and made his escape to the Block house on the Winooski river, in the west part of the town. He is now living in the town of Underhill. The Indians, after securing their prisoners, killed the cattle, sheep, and hogs belonging to Mr. Brown, set the house on fire, and started for Montreal. The prisoners suffered much on their journey through the woods, from fatigue and hunger, the most of their food being raw bear's meat. On their arrival at St. Johns, they were sold to British officers at \$8 per head, and by them retained as prisoners nearly 3 years, during which time they were compelled to labor for their masters, and allowed but miserable fare. On their return they were enabled to keep a part of their land in Jericho, and by industry and perseverance accumulated a handsome property. The two sons settled, lived, and died on the same land where they were made prisoners, and were among the most respectable families in town. Their children still own and live on a share of the same land. Mr. Messenger settled on the Winooski river, and remained there until June, 1776, when Gen. Ira Allen called on him to leave for his own safety. Mr. Messenger, with his family and a small share of their effects, in a canoe belonging to Gen. Allen, proceeded down the river to what is called Hubbell's falls, in Essex, where they unloaded. Mr. Messenger went over the falls in the canoe without injury, except breaking in the bow of the canoe. He changed ends, reloaded, and proceeded to what has since been called the Lawrence farm, where they stayed for the night. At the falls in Colchester they carried their load around, let the boat drift over, and arrived safe at the Lake, where an open boat was waiting to receive them, with others, when they were transported in safety to Skenesboro', (now Whitehall,) and from thence to Bennington, and were there at the battle. Rachel, a daughter of Mr. Messenger, is now living in town, aged 73, and is the only one of the first settlers now living here. On the return of peace, Mr. Messenger, with his family, returned to Jericho and settled on his old place, where he lived to an advanced age, an industrious and respectable farmer. The town was organized March 22d, 1786. Lewis Chapin was first town clerk, and Jedediah Lane first representative. The religious denominations are Congregationalists, Baptists, Freewill Baptists,

Methodists, Episcopalians, and Universalists. The Rev. Ebenezer Kingsbury was settled over the Congregational church June 22d, 1791, and dismissed May 10th, 1808. Rev. John Denison was settled Feb. 18th, 1809, and died March 20th, 1812. Rev. Joseph Labaree was settled July, 1814, and dismissed in January, 1819. Rev. Luther P. Blodgett was installed Sept. 19th, 1819, and dismissed in 1826. Rev. Hervey Smith was installed in 1828, and dismissed in 1831. Rev. E. W. Kellogg was installed in 1835 or '36, and dismissed in 1839. Rev. Zenas Bliss was installed Dec. 1st, 1840, and is the present minister. Elder Ephraim Butler was pastor of the Baptist church from about 1804 to 1815. Since that time Rev. Mr. Kimball, Rev. Mr. Graves, and Rev. Mr. Spaulding, have each in turn been settled over the Baptist church. Elder Isaiah Huntley is the present pastor, and has been settled about 5 years. The Methodist church have no stationed minister, but have regular circuit preaching. Rev. James Babbit was ordained over the Universalist Society, and continued several years. The Rev. Jonathan Wallace preached from 1820 to '23. There were special revivals here in the years 1809, '14, and '21. There is a village at the centre of the town, containing a good brick church, owned by the 1st Congregational Society, an academy, a store, a post office, together with a number of dwelling houses, scattered around a handsome common, given by Lewis Chapin, one of the early settlers, for that purpose. There is another flourishing village at the corners, in the westerly part of the town, containing 2 stores, a tavern, a post office, a lawyer's office, 1 woollen factory, 1 grain mill, 2 saw mills, and a meeting house, built of brick, owned and occupied by the Congregationalists and Baptists together. The town is well watered with springs and brooks. Winooski river washes the southwestern boundary. Brown's river enters the town at the northeast, from Underhill, and runs into Essex. Little river, or Lee's brook, so called, takes its rise in the east, and, running near the centre of the town, unites with Brown's river at the village, in the west part of the town. Mill Brook enters the township from Bolton, and runs into the Winooski about half way from Richmond to Essex. On all these streams are good alluvial flats, and the mill privileges are good, but the best and most numerous are on Brown's river, near the west village. The soil and timber is various in different parts of the town. It is a good farming town, and well adapted to raising most

JOE'S BROOK.

JOHNSON.

kinds of grain and grass. There are in town 14 school districts, each furnished with a school house, 1 academy, 2 churches, 2 woollen factories, 1 grain mill, 1 starch factory, 3 stores, 2 taverns, 3 tanneries, 5 saw mills, one lawyer, 3 physicians, 2 post offices, with a full share of mechanics. *Statistics of 1840.*—Horses, 291; cattle, 1,723; sheep, 5,566; swine, 563; wheat, bush. 2,412; oats, 8,246; buckwheat 557; Ind. corn, 4,566; potatoes, 32,322; hay, tons, 3,222; sugar, lbs. 11,300; wool, 13,915. Pop. 1,684. L. F.

JOE'S BROOK, or MERRIT'S RIVER, has its source in Cole's pond, near the north line of Walden, and, running nearly south five miles, falls into Joe's pond in Cabot. This pond is about three miles long, and in some places, near a mile wide, lying partly in Cabot, and partly in Danville. At the outlet is a very considerable fall, which makes some of the best mill seats in the state. From this pond Joe's brook takes a southeasterly course through Danville, and falls into the Passumpsic in Barnet. It is, in general, a rapid stream, and furnishes many excellent mill privileges. It took its names from *Joe*, an Indian, who formerly hunted on it, and from John Merritt, who made the first settlement on it, near its junction with the Passumpsic.

JOE'S POND. See Cabot and Danville.

JOHNSON, a post town in the central part of Lamoille county, is in lat. 44° 40' and long. 4° 19'. and is bounded northerly by Belvidere, easterly by Hyde-park, southerly by Sterling, and westerly by a part of Cambridge and a part of Belvidere. It is situated 28 miles northwesterly from Montpelier, and the same distance northeasterly from Burlington. It was granted, February 27, 1782, and chartered to Wm. S. Johnson and others, January 2, 1792, containing 23,040 acres. Mr. Samuel Eaton, from N. H., whose name is recorded among the heroes of our revolution, commenced the settlement of this township, in 1784. During the French war, before the reduction of Canada by the British, Mr. Eaton passed through this part of the country and down the river Lamoille to lake Champlain, on a scout. At the commencement of the revolution, he enlisted into the American army under Col. Beedle, and frequently passed through this township, while scouting between Connecticut river and lake Champlain; and several times encamped on the same flat, which he, afterwards, occupied as a farm, it being a beautiful tract of intervale in the westerly part. Like many other settlers of this state he had many difficulties to encoun-

ter. In indigent circumstances and with a numerous family, he loaded his little all upon an old horse, and set out in search of that favourite spot which he had selected in his more youthful days. He had to travel nearly 70 miles through the wilderness, guided by the trees which had been marked by the scouts, and opening a path as he passed along. He depended, for some time, after he arrived at Johnson, entirely upon hunting and fishing for the support of himself and family. The next year, a family, by the name of McConnel, and several others from N. H., commenced settlements here, and soon after mills were erected on the north branch, near its confluence with the river Lamoille. At this place are now in operation a stone grist mill, a saw mill, fulling mill and carding machine. Around these is a flourishing little village, containing 2 meeting houses, an academy and a number of mechanics, merchants, &c. The river Lamoille enters this township near the southeast corner, and, running westerly about two miles, through a rich tract of intervale, falls over a ledge of rocks about 15 feet in height into a basin below. This is called *McConnel's falls*. Thence it runs northwesterly over a bed of rocks, about 100 rods, narrowing its channel and increasing its velocity, when it forms a whirlpool and sinks under a barrier of rocks, which extends across the river. The arch is of solid rock, is about eight feet wide, and at low water, is passed over by footmen with safety. The water rises below through numerous apertures, exhibiting the appearance of the boiling of a pot. About 150 rods below this natural bridge, the river receives the north branch, and bending its course westerly, leaves the township near the southwest corner. The surface of this township is uneven, being thrown into ridges, which are covered with hemlock, spruce and hard wood. The soil is a dark, or yellow loam, mixed with a light sand, is easily tilled, and very productive. The alluvial flats are considerably extensive, but back from the river, the lands are, in some parts, rather stoney. In the northeastern part, has been discovered a quantity of soapstone. Clay, of different colors, and suitable for brick and earthen ware, is found in various places. The town contains six school districts and schoolhouses, 4 stores, 2 taverns, 2 grist, 7 saw and 1 fulling mill and 1 carding machine, together with a full complement of mechanics. *Statistics of 1840.*—Horses, 323; cattle, 1,800; sheep, 4,951; swine, 941; wheat, bush. 3,144; barley, 32; oats, 8,775; rye, 109

JUNIPER ISLAND. KILLINGTON PEAK. KIRBY. LAMOILLE COUNTY. LAMOILLE RIVER.

Indian corn, 2,402; potatoes, 66,405; hay, tons, 3,487; sugar, lbs. 31,460; wool, 10,585. Population, 1,410.

JOHNSON'S GORE. *See Acton.*

JUNIPER ISLAND is situated in lake Champlain, three miles southwest of Burlington. It contains about a dozen acres of very good land, the general surface of which is elevated 30 or 40 feet above the level of the lake, and it is surrounded upon all sides by a steep precipitous bank. It is composed of slate rock with the seams filled with calcareous spar, through which runs a curious dyke of trap rock from 1½ to 2 feet wide in a direction nearly from west to east. A light house was built here in 1826. [*See Part II, page 216.*] The distance from the light house to the south wharf in Burlington is 3 miles 48 rods. The island is supposed to have received its name in consequence of the growth of large quantities of *Juniper* (*Juniperus communis*,) upon it.

KELLYVALE. Name altered to Lowell, Nov. 1, 1831. *See Lowell.*

KEMPTON, a New York grant, located where Orange now is.

KILLINGTON. Name altered to Sherburne, Nov. 4, 1800. *See Sherburne.*

KILLINGTON PEAK is a summit of the Green Mountains in the south part of Sherburne. Its height, according to the admeasurement of Capt. A. Partridge, is 3,924 feet above tide water. It is the most northerly of the two similar peaks situated near each other. The south peak is the highest; is in Shrewsbury, and is called *Shrewsbury Peak*.

KINGLAND, a New York grant, located where the town of Washington now is. It was constituted the shire town of Gloucester county, by the legislature of New York, and a log jail erected, which gave name to *jail branch* in Washington.

KINGSTON. Name altered to Granville, Nov. 6, 1834. *See Granville.*

KIRBY, a town in the east part of Caledonia county, is in lat. 44° 29' and long. 6° 4', and is bounded north by Burke, northeast and southeast by Bradleyvale, southwest by St. Johnsbury and west by Lyndon. It lies 30 miles north from Newbury, and 36 northeast from Montpelier; was granted October 20, 1786, and chartered to Roswell Hopkins, by the name of Hopkinsville, October 27, 1790, containing 11,264 acres. Since, 2,527 acres have been taken from Burke and annexed to this township. The settlement of this township was commenced about the year 1799, by Phineas Page and Theophilus Grout, who were soon after joined by Josiah Joslin, Jude White, Jonathan Leach, Ebenezer Damon, Anti-

pas Harrington, Asahel Burt, Jonathan Lewis and others, principally from New Hampshire and Massachusetts. The town was organized August 29, 1807. Jonathan Lewis was the first town clerk, and Theophilus Grout was the first representative. The epidemic of 1813 was very mortal here, 21 dying this year, many of them heads of families. The town has since been remarkably healthy. A small Congregational church was formed here about the year 1812, and now consists of 45 members. There are also some Baptists, Freewill Baptists, and Methodists. The surface of the town is uneven, and, in many places, ledgy or swampy. There are, however, some tracts of very good land. There are no considerable streams. Near the centre of the township is a small pond, from which issues a brook, on which a saw mill was formerly erected. The town is well watered with springs and brooks. *Statistics of 1840.*—Horses, 171; cattle, 1,061; sheep, 3,287; swine, 587; wheat, bus. 2,370; barley, 733; oats, 7,268; rye, 205; buckwheat, 401; Indian corn, 1,020; potatoes, 29,435; hay, tons, 1,887; sugar, lbs. 8,142; wool, 4,547. Population, 520.

KNIGHT'S GORE, or KNOWLTON'S GORE. Constituted a township by the name of Bakersfield, October 25, 1792.

KNOWLTON'S LAKE, a considerable body of water nearly on the line between Brighton and Wenlock, from which issues the principal head branch of Clyde river.

LAMOILLE COUNTY lies between lat. 44° 24' and 44° 46' and long. 4° 7' and 4° 34', and is bounded north by Franklin and Orleans counties, east by Orleans and Washington, south by Washington and Chittenden, and west by Chittenden and Franklin. Its extent is about 27 miles from north to south, and nearly the same from east to west, and it contains about 420 square miles. It was incorporated from the adjoining counties October 26, 1835. Hyde park is the shire town. The county is watered wholly by the river Lamoille and its branches, and along this river are some fine tracts of intervale. No settlements were made in this county till after the revolution. The supreme court sits in this county on the 10th Tuesday after the 4th Tuesday in January, and the county court on the 2d Tuesday in June and December. *Statistics of 1840.*—Horses, 2,597; cattle, 16,555; sheep, 40,921; swine, 7,287; wheat, bus. 21,070; barley, 477; oats, 70,727; rye, 1,604; buckwheat, 763; Indian corn, 28,483; potatoes, 472,563; hay, tons, 29,616; sugar, lbs. 296,476; wool, 85,595. Population, 10,388.

LAMOILLE RIVER formerly originated

LANDGROVE.

LAPLOT RIVER.

from a pond in the southeast corner of Glover. *Ses Glover*. It is now formed by the union of several streams in Greensborough, and, after running southwesterly into Hardwick, pursues a northwesterly course till it falls into lake Champlain, in the northwest corner of Colchester. This river is joined in Hardwick by a considerable stream, which issues from Caspian lake in Greensborough, in Wolcott by Green river from Hydepark, in Johnson by little North branch, in Cambridge by great North branch, and in Fairfax by Brown's river. The current of the river Lamoille is, in general, slow and gentle above Cambridge. Between this township and the lake are a number of considerable falls. Along this river are some very beautiful and fertile tracts of interval. It is not quite so large as the Winoski and Missisco. It is said to have been discovered by Champlain, in 1609, and called by him *la mouette*, the French for mew, or gull, a species of water fowl, which were very numerous about the mouth of this stream. In Charlevoix's map of the discoveries in North America, published in 1744, it is called *la riviere a la Mouelle*, probably a mistake of the engraver in not crossing the t's. Thus to the mere carelessness of a French engraver are we indebted for the smooth, melodious sounding name *Lamoille*.

LANDGROVE, a post town in the northeast corner of Bennington county, is in lat. 43° 16' and long. 4° 12', and is bounded north by Weston, east by Weston and Londonderry, south by a part of Londonderry, and west by Peru. It lies 33 miles northeast from Bennington, and 70 south from Montpelier; was granted the 6th and chartered the 8th of November, 1780, to William Utley and others, containing 4,646 acres. The settlement was commenced by William Utley and family, consisting of a wife and six children, in June, 1769, emigrants from Ashford, Conn. Mr. Utley had, the preceding year, purchased 40 rights of land in Peru, which was represented to him, as lying west of Andover, and adjoining that township. From Chester, where about 20 families had settled, he cut his road before him, 14 miles into the wilderness, till he arrived at a branch of West river, where he commenced his settlement. For some time he had to bring provisions for the support of his family from Connecticut river, distant about 30 miles. Finding that Peru did not join Andover, and that the lands on which he had settled, were ungranted, he petitioned the legislature, and obtained a charter of them, as above stated. He died in March, 1790,

aged 66 years, and his widow, in February, 1811, aged 86. The town was organized in March, 1800. Daniel Tuthill was first town clerk, and David Carpenter first representative, both chosen that year. There is a small society of Methodists, and a few of other denominations. The streams are several of the head branches of West river. Salmon formerly came up to this place, from the Connecticut, and were taken with spears. One was driven on shore by a dog and caught. An excellent road, leading from Chester to Manchester, passes through the township, on which a mail stage runs regularly every day in the week, except Sunday. There are here 3 school districts and school houses, 3 saw mills, 1 store and 1 tavern. *Statistics of 1840.*—Horses, 72; cattle, 555; sheep, 1,191; swine, 155; wheat, bush. 320; barley, 76; oats 375; rye, 145; buckwheat, 728; Indian corn, 716; potatoes, 13,550; hay, tons, 1,204; sugar, lbs. 6,780; wool, 2,350. Population, 345.

LAPLOT RIVER. This stream rises in the southeastern part of Hinesburgh, and, running northwesterly through a corner of Charlotte, and through Shelburne, falls into the head of Shelburne Bay. It is a small stream, about 15 miles in length, and affords several mill sites. Respecting the origin of the name of this stream, tradition has handed down the following stories. In the fall of 1775, a party of Indians was discovered, making their way up Shelburne Bay, in their bark canoes. From the head of the bay they proceeded about 100 rods up this stream and landed on the west side; and, having drawn their canoes on shore and concealed them among the bushes, they proceeded cautiously forward for the purpose of surprising and plundering the settlement, which was about half a mile distant. Their motions having been watched and the alarm spread among the settlers, the men were mustered to the number of ten, and a consultation was held with regard to the course to be pursued. Concluding that the Indians, if vigorously attacked, would make a precipitate retreat to their canoes, it was agreed that three of their number should proceed to their place of landing and disable their canoes, by cutting slits through the bark in various places, and then conceal themselves near by and await the result; while the other seven should make a furious and tumultuous assault upon the enemy, who had already commenced their work of plunder. The plot succeeded beyond their most sanguine expectations. The onset of the seven, favored by the approach of night

LEECH'S STREAM.

LEICESTER.

LEMINOTON.

was made with so much show and spirit, as to lead the Indians to suppose that they were assailed by a force far superior to their own, and that their only chance of escape consisted in a hasty retreat to their canoes. They accordingly betook themselves to flight, and, being closely pursued, when they reached their landing place, they seized their canoes, hurried them into the stream, and leaped on board with the utmost precipitation. But what was their surprise when they found their canoes were disabled and were all filling with water! In this forlorn condition they were attacked by the three men, who had lain concealed on the bank, and the pursuing party soon coming to their aid, the Indians were all shot, while struggling to keep themselves afloat, or sunk to rise no more—not an individual being allowed to escape to tell to their kindred the tale of wo. This well contrived and successful stratagem gave name to *Laplot (the plot) River*. So says tradition. Another and more probable account of the origin of this name is, that, during the colonial wars and before any settlements were made in these parts, an ambush was formed near the mouth of this stream for an English scouting party which was expected that way, but the scout getting information of the plot, managed to surprise and defeat the liers-in-wait, and to slaughter the greater part of their number, and hence the name *La Plot*. But these traditions to the contrary notwithstanding, this river undoubtedly took its name from the point in the west part of Shelburne, called on the early French maps *Pointe au Plâtre* or Plaster Point. It was formerly often written *La Platte*.

LEECH'S STREAM, proceeds from a small pond in the north part of Averill, and runs about northeast across the west part of Canaan, and falls into Leech's pond, which is about 2 miles wide and 3 long, and lies about half in Canada and half in Vermont. From this pond the stream runs nearly east about 3 miles, then southeast into Connecticut river. Its mouth is nearly 2 rods wide.

LEICESTER, a small post town in the south part of Addison county, is in lat. 43° 51' and long. 4° 0', and is bounded north by Salisbury, east by Goshen, south by Brandon, and west by Whiting. It lies 9 miles south from Middlebury, and 36 southwest from Montpelier; and was chartered Oct. 20, 1761. The settlement was commenced in 1773, by Jeremiah Parker, from Massachusetts. The settlement, however, made but little progress till after the revolution. The town was organized in 1786. Ebenezer Child was first

town clerk, and John Smith first representative. The Methodist society is the most numerous. There are some Baptists, Congregationalists, and Universalists. The principal streams are Otter creek and Leicester river. The former runs through the township near the west side, and the latter runs across the north-west corner, and falls into Otter creek. The current of these streams is very slow, and they furnish, in this township, no sites for mills. Lake Dunmore lies partly in this township, and partly in Salisbury. There are two other ponds; one, a little south of lake Dunmore, is $\frac{3}{4}$ of a mile long, and half a mile wide, and is called Little Pond, and the other, a little west of lake Dunmore, is about a mile in circumference, and is called Mud Pond. There is also a pond east of lake Dunmore, and east of a range of the Green Mountains, which abounds in excellent trout. The other ponds furnish bull heads, perch, and trout. The principal elevation is a branch of the Green Mountains, running through the eastern part, called Bald hill. The soil is a rich, sandy loam, interspersed with some flats of clay. Along the river are valuable tracts of intervalle. In approaching the mountain towards the east, the soil becomes harder and less productive. *Statistics of 1840.*—Horses, 113; cattle, 726; sheep, 5,531; swine, 325; wheat, bush. 772; oats, 3,175; rye, 863; buckwheat, 24; In. corn, 3,321; potatoes, 10,960; hay, tons, 4,600; sugar, lbs. 820; wool, 12,900. Population, 602.

LEMINOTON, a township in the northeastern part of Essex county, is in lat. 44° 53' and long. 5° 22', and is bounded northerly by Canaan, easterly by Connecticut river, which separates it from Colebrook, N. H., southerly by Bloomfield, and westerly by Averill. It lies 64 miles northeast from Montpelier, and was chartered June 29, 1762, containing 23,040 acres. The settlements in this township are mostly confined to the margin of Connecticut river. There are three large brooks running through the township, which are tributaries to the Connecticut, on one of which is a cascade of 50 feet. The most northerly of these streams is called Willard's brook. The Monadnock mountain of Vermont lies in the northeast corner of this township. The town is divided into 2 school districts, and contains 2 saw mills. *Statistics of 1840.*—Horses, 44; cattle, 266; sheep, 483; swine, 126; wheat, bush. 294; barley, 65; oats, 1,120; buckwheat, 1,112; In. corn, 163; potatoes, 7,470; hay, tons, 503; sugar, lbs. 1,650; wool, 757. Population, 124.

LEMONFAIR RIVER.

LEWIS CREEK.—LINCOLN.

LONDONDERRY.

LEMONFAIR RIVER, is a branch of Otter creek, which rises in Whiting and Orwell, runs through the eastern part of Shoreham, across the southeast corner of Bridport, and joins Otter creek in Weybridge. There are some mill seats near the head of this river, but it is, in general, a very sluggish, muddy stream. The following is the account given of the name of this stream. As some of the early settlers were coming into this part of the country, they arrived at this muddy stream, and seeing the difficulty of crossing it, an old woman of the company exclaimed, "*It is a lam-en-ta-ble affair*," and this exclamation, contracted into *Lemonfair*, became ever afterwards the name of the stream.

LEWIS, an uninhabited township six miles square in the northern part of Essex county, bounded northeasterly by Averill, southeasterly by Bloomfield, southwesterly by Wenlock, and northwesterly by Avery's gore. It was chartered June 29, 1762. It is mountainous, and has no streams of consequence, excepting the north branch of Nulhegan river which crosses the northeast corner.

LEWIS CREEK rises near the north line of Bristol, runs north through the western part of Starksborough and eastern part of Monkton, into Hinesburgh, thence westerly through the south part of Hinesburgh and the southeast corner of Charlotte, and falls into lake Champlain in Ferrisburgh, a short distance north of the mouth of Little Otter creek. The mill privileges on this stream are numerous, and many of them excellent.

LINCOLN, a post town in the northeastern part of Addison county, is in lat. 44° 7' and long. 4° 5', and bounded north by Starksborough and Fayston, east by Warren, south by Avery's gore, and west by Bristol. It lies 21 miles southwest from Montpelier, and 28 southeast from Burlington; was granted November 7, and chartered November 9, 1780, to Benjamin Simonds and associates, containing 23,040 acres. The settlement of this township was commenced about the year 1790. The first settlers were mostly of the denomination called Friends, or Quakers. There is, at present, a society of this order who have a house for public worship. The township is considerably uneven. The western part is watered by New Haven river, which is formed here; and several small branches of Mad river rise in the eastern part. The timber is principally hard wood with some tracts of spruce. The town is divided into 4 school districts, and contains 1 store and 7 saw mills. *Statistics of 1840.*—Horses, 156;

cattle, 880; sheep, 3,094; swine, 382; wheat, bu. 860; oats, 2150; rye, 120; buck-wheat, 187; Indian corn, 1,080; potatoes, 20,400; hay, tons, 650; sugar, lbs. 29,510; wool, 9,000. Population, 770.

LITTLE OTTER CREEK rises in Monkton and New Haven, and falls into lake Champlain in Ferrisburgh, three miles north of the mouth of Otter creek. This stream towards its mouth is wide and sluggish, and runs through a tract of low, marshy ground. It affords but few mill privileges.

LITTLETON. Name altered to Waterford, March 9, 1797. *See Waterford.*

LOCUST CREEK is a small mill stream which rises in Barnard, and falls into White river in Bethel. It is, in general, a rapid stream, and affords several good mill seats.

LONDONDERRY, a post town in the northwest corner of Windham county, is in lat. 44° 7' and long. 4° 19', and is bounded north by Weston and a part of Landgrove, east by Windham, south by Jamaica, and west by Landgrove. It lies 30 miles northeast from Bennington and 27 southwest from Windsor. This township was chartered Feb. 30, 1770, by New-York, by the name of Kent. In 1778, the lands were confiscated on account of James Rogers, the principal proprietor, becoming a tory, and leaving the country. It was regranted by the government of Vermont, March 16, 1780, and chartered to Edward Aiken, April 20, of the same year. In the years 1795 and 97, James Rogers, jr., petitioned the Legislature, and obtained all the confiscated land, which remained unsold. The settlement of the township was commenced about the year 1774, by James Rogers, S. Thompson and James Patterson, from Londonderry, N. H. There are here a Baptist, a Congregational and a Methodist church, all of which are small. Elder David Sweet was ordained over the Baptist church in June, 1820. The Congregationalists have a meeting-house, erected in 1813. The epidemic of 1812 and '13 was very mortal. West river enters the township from Weston, and passes through it in a southerly direction into Jamaica. West river receives here Winhall river and Utley brook from the west and a considerable mill stream which originates from a pond in Windham. Mill privileges are numerous. In the south part is a bed of very fine clay. There are here two small villages. *Statistics of 1840.*—Horses, 251; cattle, 2,081; sheep, 4,206; swine, 796; wheat, bus. 1,066; barley, 971; oats, 9,753; rye, 1,103; buck-wheat, 1,039; Indian corn, 2,164; potatoes, 41,579

LOWELL.

LUDLOW.

hay, tons, 3,422; sugar, lbs. 21,076; wool, 9,197. Population, 1,216.

LONG POND. *See Glover.*

LOWELL, a post town in the western part of Orleans county, is in lat. 44° 47' and long. 4° 21', and is bounded north by Troy, Westfield, Coventry gore and a part of Montgomery, southeast by Irasburgh and Albany, southwest by Eden and Belvidere, and westerly by Avery's gore. It lies 36 miles north from Montpelier, and 42 northeast from Burlington. It was granted March 5, 1787, and chartered to John Kelly, by the name of Kellyvale, June 7, 1791, containing 39,000 acres. November 1, 1831, the name was altered to Lowell. During the revolutionary war Col. Hazen, attempting to open a road from Connecticut river to St. Johns in Canada, proceeded with a part of his regiment as far as this township, and encamped, for some days, on the flat near the Missisco river. The road was made passable from Peacham to this place, and was cut but not cleared several miles further. The first permanent settlement was made here by Maj. Wm. Caldwell, in April, 1806. The town was organized March 31, 1812, and Abel Curtis was first town clerk. Asahel Curtis was the first representative, and Wm. Caldwell, Asahel Curtis and John Harding, the first selectmen. The first company of Militia was organized in June, 1819, and commanded by Capt. Horatio Walker. The Missisco river originates in a small pond nearly on the line between this township and Eden, and, taking a northerly course and receiving a number of considerable tributaries, enters Westfield near its southeast corner. Several of these tributaries are sufficient for mills, and the river is increased by them to considerable magnitude, forming meadows of considerable extent and fertility, before leaving the township. Although encompassed by mountains on all sides, except the northeast, much of the township is handsome land, easy to till and generally productive. It is timbered mostly with hard wood, with some tracts of spruce and hemlock, and on the flats now and then a valuable pine. At the grist mill of Asahel Curtis near the centre of the township, the whole river passes through a hole in the solid rock. This natural Bridge is situated at the foot of a fall in the river of about ten feet. The top of the bridge is about three feet wide, and the same distance from the surface of the water, and under it the water is 15 feet deep. A range of serpentine passes through this township in a northeasterly direction, and through the corner of Westfield into Troy. The timber on this range

is almost exclusively spruce and hemlock. The serpentine is accompanied with beautiful, precious serpentine and an abundance of very fine asbestos and amianthus. The river passes through the range and also the principal road leading from Craftsbury to Montreal, near the centre of the township, where the serpentine forms a considerable precipice. Near the line between Lowell and Westfield, and but a few rods from the road leading to Troy, the serpentine forms another bluff, called Serpentine hill. At both these places asbestos is plenty. Chlorite, and chlorite slate are common, and also an inferior species of steatite, or soapstone. Bitter spar of a fine quality, talc and magnetic iron are found in connexion with the serpentine. Pudding stone is found on the bank of the Missisco river. The best road from Burlington to Stanstead passes through this town. There is a pleasant little village near the centre from which there is a fine view of Hazen's Notch. The town contains 2 stores, 1 grist and 3 saw mills.—*Statistics of 1840.* Horses, 72; cattle, 584; sheep, 1,074; swine, 348; wheat, bus. 591; barley, 96; oats, 2,444; rye, 299; buckwheat, 1,610; Indian corn, 397; potatoes, 22,417; hay, tons, 1,084; sugar, lbs. 14,635; wool, 2,107. Population, 431.

LUDLOW, a post town situated in the southwestern part of Windsor county, borders on the west upon the Green Mountains, and contains within its limits the eastern declivity of a lofty summit known as the "Centre Mountain." It is bounded north by Plymouth, east by Cavendish and Chester, south by Andover and Weston, and its western line passes for about nine miles along the ridge of highlands which separate Windsor and Rutland counties, and form the boundary between Ludlow and Mount Holly. The town is irregular in its form, the greatest length being from north to south, and the extreme width from east to west, south of the centre, and contains about 30 square miles. As originally chartered it embraced the eastern half of what is now Mount Holly, which, with the eastern half of Wallingford, was afterwards made a separate township. The charter bears date Sept. 16, 1761, but no attempt was made at commencing a settlement until 1784-5, when Josiah and Jesse Fletcher, Simeon Read, and James Whitney, emigrants from Massachusetts, removed within the limits of the township, and began their clearings upon the alluvial flats bordering upon Black River. The only relics of Indian ownership ever discovered within the town are those common throughout the state. No remarkable events or

LUDLOW.

LUDLOW.

transactions, except the hardships common to the settlers of every new country, characterized the early settlement of this place. The settlers were hardy and industrious, and the obstacles of nature, the unbroken forests, and the miasmas of a newly opened country were gradually overcome, until, in 1792, the town was organized, Jesse Fletcher being chosen first town clerk, and Peter Read, afterwards, for many years pastor of the Congregational church and society, first representative. There are in town a Congregationalist, a Methodist, a Universalist, and two Baptist societies. The Congregational was the earliest organized. In the summer of the year 1792 it was first proposed by some few of the sparse population to commence a meeting for public worship on the Sabbath. It was accordingly done, and continued until the following winter, when it was discontinued. It was again resumed the following spring, and so continued, with the exception of the winter seasons, for several years. In the year 1803 the organization of a church was first proposed, but time was needed for consultation, and the formation of a suitable plan, and articles of faith, and it was not until Sept. 1806, that its organization was completed. It then consisted of twenty-four members. They held monthly conferences and were occasionally supplied with preaching from other towns, until 1810, when Rev. Peter Read became their pastor. He was one of the first members of the church, was elected to the office of deacon in 1806, and in that capacity conducted their meetings until 1808, when he was licensed to preach by the Rutland Association. From his ordination in 1810 he continued their pastor until 1826, when the infirmities of age compelled him to resign his charge. An eminently good and pious man, his many virtues and long life of usefulness endeared him as a father to the citizens of the town, and the members of his church. The society occupied for many years the church built by the first settlers, a rough and old fashioned building, but in 1839 they erected a new and commodious house. The Baptist church was not organized until 1825, although they had had stated meetings, and been supplied with preaching for many years previous. As early as 1806 there were in town thirteen of that denomination. Their meetings at that time were frequent, and usually held in private houses. They were for several years conducted by Benj. Pierce, not an ordained minister, but whose memory has come down to us as that of a spirited and devoted, as well as successful preacher. For many years

previous to their organization they were considered a branch of the Cavendish church, and were supplied with preaching from that town, although the members were many of them communicants with the churches in Andover and Chester. At their organization in 1825 they numbered 50 members. The formation of the second Baptist church took place in 1834, and had its origin in the temperance movement of that period. In 1840 they numbered 147 members, and in the present year they have completed and dedicated a new and elegant house of worship. The Universalist society was organized in 1835, and occupy a very beautiful church erected by them in 1836. In addition to the houses of worship above mentioned, there is one in town erected in 1819 as a union house, and owned, as were the first churches in nearly every town, in common by the different denominations.

The Black River Academy, a literary institution, chartered by the legislature in 1835, is located here. The building occupies a commanding situation near the centre of the village, and for beauty of prospect is unrivalled by any place in the vicinity. A very respectable apparatus is attached to it, and it bids fair to stand among the first of the academical institutions in the state. A town library has been commenced by the public spirit of the inhabitants, numbering now about 300 volumes. The town is divided into 15 school districts, each provided with convenient buildings for the accommodation of schools.

The village is pleasantly situated near the centre of the town, on both sides of Black river, and in 1837 numbered 765 inhabitants. It contains 4 stores, doing the business of the town, and of an extensive section of country centering here, 2 large woollen manufacturing establishments, a grist and saw mill, mechanics to supply the population of many miles about, and nearly 100 dwelling houses. There is another small village in the east part of the town, containing a comb manufactory, doing a flourishing business, a mill for grinding whetstones, and several mechanics.

Black river passes through the centre of the town, and has many valuable mill seats; in the upper part of its course it widens into four large basins, the largest in Ludlow being nearly circular, and one mile in diameter, known as the Ludlow and Plymouth ponds. In the north west corner of the town is the "Tiney pond," several hundred feet above the level of the river, and nearly half a

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mile in diameter. No stream supplies it, but a small rivulet passes from it, tumbling from one rock to another in its rugged course, until, after passing half a mile, it empties into the largest Ludlow pond. The only fish it contains is that commonly called the horn pout. There is another large collection of water in the western part of the town, and several extensive bogs upon both sides of the river, now presenting only a surface of mud, covered many feet deep with moss, but evidently once the bed of mountain ponds. These bogs afford the botanist many rare and curious varieties of shrubs and flowers. The soil upon the river is alluvial, and throughout the town is fertile, and well adapted for grazing and cultivation. The timber is mostly hard wood, the varieties of maple, beech, birch and ash. The declivity of Centre mountain abounds in spruce and hemlock, and the two highest of the table lands in town were found at its first settlement heavily wooded with a growth of pine of the largest size. The prevailing rock is mica slate, and, imbedded in masses, or forming independent boulders, are found the white, ferruginous and smoky quartz, black and green hornblende, and steatite, with localities of ligniform asbestos, its strands from 12 to 24 inches in length, plumbago, galena, and garnet. In the western part of the town, are quarries of the carbonate mingled with the sulphate of lime, and containing beautiful specimens of calcareous spar. In the eastern border is a lofty range of serpentine, containing the harder varieties of asbestos, talc and hornstone, and forming, near the line of Cavendish, that most beautiful variety of marble known by the name of the *verd antique*. Limestone and serpentine mingle, and produce every possible shade of green, from the lightest grass to an almost perfect black, and these shades running into each other in a most pleasing and apparently never ending variety. By the perseverance and energy of Mr. I. Hills, quarries have been opened, and tables, fire-places, and other articles produced which bid fair to rival the productions of any state. This range of serpentine undoubtedly once formed the eastern barrier of a large body of water, whose waves rolled over the central part of Ludlow, and all that portion of Plymouth extending from the line of Ludlow to the source of Black river. That such a collection of water once existed, and that it was drained by the wearing away of the serpentine range through a long course of years is evident from traces of the action of water upon the rocks, many feet above

their present level in the bed of the stream, and from the successive tiers of alluvial table lands, which, at different heights, and successively increasing distances from the river, now furnish the most fertile land in the town. In the southern part of the village is a curious elevation of earth, whose formation can only be accounted for by supposing that at this point two streams once mingled their waters in the lake, forming an eddy, and depositing the gravel and soil which the fall and spring rains would loosen from the surrounding hills. And, in fact, the conformation of the country about shows that once a stream came from the northwest, in what is now the channel of Black river, and another from the south, between the range of "Centre" and "South mountains" and "Bear hill," in what is now the channel of "Jewell brook" so called, and mingled their waters at this very point. This elevation, called in common parlance the "Hog back," is about 75 feet in height, 40 rods in length from east to west, and with just thickness enough from north to south to admit a narrow foot path upon its summit, and as steep as the earth and stones will lie, while on every side it stands perfectly detached from the neighboring hills, and surrounded by alluvial flats. Its composition is earth, pebbles, and small stones, all rounded evidently by the action of water, and without any of the angular points and sharp corners found on stones freshly detached from their native ledge, and arranged in regular strata consisting of alternate layers of earth, sand and pebbles, dipping at an angle corresponding with the sides of the hill. Below Duttonsville, in Cavendish, three miles below the point where the serpentine range crosses the stream, is another of those rocky barriers which once dammed up the waters of Black river. The water has there worn its bed an hundred feet deep through cliffs of mica slate, for nearly a mile, leaving traces of its tremendous effort in the huge and disjointed masses of rock, the ragged and overhanging cliffs which present themselves upon both sides of its channel throughout the whole course:—while, commencing at the head of the present rapids, and passing off southerly through a portion of Chester into Springfield, through what is now the gulf road, to the latter town, are traces of the ancient bed of the river, consisting of cliffs and large masses of stone, worn deep in various places, and presenting large and numerous cavities, evidently the result of the action of pebbles whirled by the eddies of

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the stream. The highest of the table lands in Ludlow, of which there are three elevations, was undoubtedly formed by the lake while in its original form; and the successive disruptions of the serpentine range, before mentioned, and the barrier at the head of Dutton's falls, would easily account for the formation of the two lower tiers.

Iron ore of the purest kind, and equal to the Franconia ore, has been found on "Bear Hill," a lofty eminence in the southwest corner of the town; and, mingled with the common ore, are found masses of the native magnet, beautiful specimens of the specular and micaceous oxydes, and the sulphuret of iron. On the serpentine range, in the south east corner of the town, are found masses of chlorite, containing the magnetic oxyde of iron in handsome octahedral crystals. Separate them from their bed, and the magnet of Bear Hill will pick them up in any quantity. Isolated, but most elegant specimens of cacholong, amethyst, and epidote in crystals, have been also found.

Bears are still common upon the mountain: deer are occasionally seen; the wolf and wild cat, in the earlier period of the settlement, abounded in the forests, and the otter in the streams. The woods are still well stored with game of the smaller kinds, and the ponds and brooks are the resort of fishermen for miles. *Statistics of 1840.*—Horses, 277; cattle, 1,906; sheep, 4,861; swine, 693; wheat, bus. 1,395; barley, 93; oats, 7,821; rye, 583; buckwheat, 643; Indian corn, 3,060; potatoes, 23,626; hay, tons, 3,600; sugar, lbs. 5,154; wool, 9,069. Population, 1363.

Oct., 1841.

P. T. W.

LUNENBURGH, a post town in Essex county, is in lat. 44° 28' and long. 5° 15', containing 46 square miles. It lies 45 miles east northeast from Montpelier, is bounded northwest by Victory, northeast by Guildhall, southeast by Connecticut river, southwest by Concord, and is opposite to Dalton, in N. H. It was chartered July 5, 1763, and granted to David Page, Jonathan Grout and others. It is difficult to determine the precise time when the first settlement of this town was commenced. The settlement which was begun in the lower part of Guildhall about the year 1764 was long thought to be in this township; and one of the farms, lying in a bow of Connecticut river, which was first occupied, still bears the name of the "Lunenburg farm." This town was probably settled as early as 1770, and was organized "at a meeting of the major part of the inhabitants, Sept. 11, 1781."

David Hopkins was first town clerk. The religious denominations are Congregationalists, Baptists and Methodists. The Congregational church in Lunenburg was organized in 1802, and then consisted of 16 members. The male members of the society for settling and supporting a minister of this order, amounted to 26, and in the spring of the next year they settled the Rev. John Willard for their pastor. He continued his connexion with them till the spring of 1822, but did not preach constantly during several of the last years. On the 16th of July of this year, they settled the Rev. Anson Hubbard, who was dismissed July 6, 1825, and was succeeded January 10, 1827, by Jeremiah Glines, the present minister. Their meeting house was erected about 1789. The Rev. E. L. Clark is minister of the Baptist society, and the Rev. E. Petingill of the Methodist. The latter built a house of worship in 1839. The Baptists also erected a small meeting-house many years ago. The dysentery was very mortal here in 1822, as was the canker rash in 1832. Some part of this township is extremely stoney, particularly the southwestern, next to Concord, where the ground is almost wholly covered with detached rolling masses of gray granite. The earth to a considerable depth appears to be a diluvial formation, consisting of rounded masses of granite imbedded in clay and gravel. The north eastern part is less stoney and presents a valuable farming country, particularly the flats along the river, which are a deep alluvial deposit and very productive. The timber is generally hard wood. The road from Danville to Guildhall passes through this town. Connecticut river waters the southeastern part of the township, and near the south corner commences the *Fifteen mile falls*. Its other waters are *Neal's pond* near the centre of the town, which is about a mile long and half a mile wide, and *Neal's branch*, which passes through it, and *Catbow branch* which rises in Guildhall and runs through the east corner into Connecticut river. These are both considerable mill streams. The inhabitants are industrious and enterprising. The town is divided into 11 school districts, which are furnished with school houses. There are 2 stores, 1 tavern, 1 grist and 3 saw mills, 1 fulling mill, 1 carding machine, 2 tanneries, 1 starch factory, 2 clover mills, &c.—*Statistics of 1740.*—Horses, 325; cattle, 1,888; sheep, 3,549; swine, 917; wheat, bush. 3,308; barley, 462; oats, 11,960; rye, 761; buckwheat, 1,086; Indian corn, 1,628; potatoes, 81,630; hay, tons,

LYNDON.

MAD RIVER.

MAIDSTONE.

3,558; sugar, lbs. 18,210; wool, 6,147. Population, 1,130.

LUTTERLOH. Name altered to Albany, Oct. 30, 1315. *See Albany.*

LYNDON, a post township in Caledonia county, is situated in lat. $44^{\circ} 22'$ and long. $4^{\circ} 58'$, containing 23,040 acres, or 36 square miles. It is 34 miles northeasterly from Montpelier, and is bounded north by Sutton and Burke, east by Kirby, south by St. Johnsbury and west by Wheelock. This town was surveyed before any of the towns around it and was laid exactly square. Hence its regularity and the irregularity of those adjacent. It was granted Nov. 2, and chartered Nov. 20, 1780, to Jonathan Arnold and his associates. The settlement of the town was commenced by Daniel Cahoon, jr. in April, 1788. He continued here with several workmen till the ensuing fall, when he returned to Windham, N. H. his former place of residence, to pass the winter. In the spring he again returned, and several others began settlements. In March, 1791, there were six or seven families in town and several young men without families had commenced, so that on the 4th day of July, 1791, the town was organized and the first town officers elected. On the 20th June, 1792, there were 30 legal voters in town. From this time for a number of years the progress of the settlement was very rapid. Daniel Cahoon, jr. the first settler, deceased June 11, 1793, and was the first person who died in the town. The Methodist church in this town is much the most numerous. The other denominations are Congregationalists, Baptists and Freewill Baptists. The Congregational church was organized Nov. 30, 1817; settled the Rev. Samuel G. Tenney, June 29, 1825, who was dismissed Jan. 19, 1831; settled the Rev. Amos Blanchard, Jan. 9, 1833, who was dismissed in 1736, and settled the Rev. Wm. Scales, jr. the present minister Dec. 27, 1837. This church consists of 96 members. Of the other denominations we have no particulars. *Passumpsic* river waters this town. It crosses the north line of Lyndon 150 rods from the northeast corner, and runs a southwesterly course till it has passed the centre of the town 100 rods; thence southeasterly about two miles, and thence southerly till it crosses the south line of the town, two miles west of the southeast corner. Its average width from the centre of the town southerly is about 125 feet. The principal tributaries which it receives in Lyndon are the North branch, Miller's river, South branch and Hawkins' brook, all of which are sufficiently large for

mills. At the *Great falls* in the *Passumpsic*, near the south part of the town, the water descends about 65 feet in the distance of 30 rods. At the *Little falls* one mile above, the water descends 18 feet, affording excellent situations for mills and water machinery. 'Agarie mineral is found in this township, forming the bottom of two ponds of several acres in extent. It is white and soft, soils the fingers and may be used instead of chalk, which it resembles, but is much less compact. It has been employed for all the purposes to which Spanish white is applied; and, also, for white-washing. The thickness of the beds has not yet been ascertained.' Lyndon is a very valuable township. Its soil is a rich loam, free from stone, easy to cultivate and very productive. At "Lyndon Corner" is a neat and pleasant village containing an academy, meeting-houses, &c. and there is a meeting-house near the centre of the town. There are 4 stores, 8 saw, 2 grist and 1 falling mill, and 2 tanneries. *Statistics of 1840.*—Horses, 546; cattle, 3,359; sheep, 8,786; swine, 1,931; wheat, bush. 3,370; barley, 655; oats, 35,376; rye, 155; buck-wheat, 3,350; Indian corn, 7,277; potatoes, 113,934; hay, tons, 6,015; sugar, lbs. 68,364; wool, 15,850. Population, 1,753.

MAD RIVER, rises in Avery's gore, runs north into Warren, thence northeasterly through Waitsfield and falls into the *Winoski* in Moretown, receiving in its course a great number of small tributaries. It is a rapid stream with a rocky bottom, and affords a number of good sites for mills. Its length is about 20 miles.

MAIDSTONE, a township in the eastern part of Essex county, is in lat. $44^{\circ} 30'$ and long. $5^{\circ} 19'$, and is bounded northerly by Brunswick, easterly by Connecticut river which separates it from Northumberland, N. H. southerly by Guildhall and a part of Granby, and westerly by Ferdinand. It lies 53 miles northeast from Montpelier and was chartered Oct. 12, 1761, containing 17,472 acres. The settlement of this township was, probably, commenced about the year 1770, but the population has remained nearly the same since the year 1791. This township is watered by Paul's stream, which runs through the north part, and by Maidstone lake, which is three miles long and half a mile wide, lying in the western part and discharging its waters into Paul's stream. The settlement here is mostly confined to the margin of Connecticut river, along which a road passes through the township. *Statistics of 1840.*—Horses 77; cattle, 476; sheep, 1,413; swine

MANCHESTER.

305; wheat, bush. 853; barley, 283; oats, 3,955; rye, 150; buck-wheat, 1,069; Indian corn, 962; potatoes, 15,310; hay, tons, 863; sugar, lbs. 11,200; wool, 3,356. Population, 271.

MANCHESTER, a post and half shire town in Bennington county, is in lat. 43° 10' and long. 4° 1', and is bounded north by Dorset, east by Winhall, south by Sunderland and west by Sandgate. It is 22 miles north from Bennington, 48 from Troy and 32 south from Rutland. It was chartered Aug. 11, 1761, containing about 40 square miles. The settlement of this township was commenced in 1764 by Samuel Rose and others from Dutchess county, N.Y. The town was organized in 1766, and Stephen Mead was first town clerk. It was first represented in the General Assembly in 1778, by Gideon Ormsby and Stephen Washburn. The religious societies are Congregationalists, Baptists and Episcopalians. The two former have been under the care of successive pastors from an early period, but we have not been able to obtain particulars. The present minister of the Congregational church is the Rev. James Anderson. The Episcopal church, called *Zion's Church*, is one of the oldest in the state. In Oct. 1782, 24 persons here united in inviting the Rev. Gideon Bostwick to the care of the parish. The Rev. James Nichols and the Rev. Daniel Barber were also early ministers. From 1802 to 1825 the Rev. Abraham Bronson officiated half the time, and from 1825 to '33, the whole time, when he resigned and left the diocese. The Episcopal church was built in 1821, at the village called Factory Point. The ministers since 1833, have been the Rev. Freeman Lane, Rev. A. H. Cull, and Rev. John T. Sabine, who is the present rector.—Communicants, 35. There are here four practising physicians and four attorneys. The principal stream is the Battenkill, which rises in Dorset and runs through the township in a southwesterly direction. It receives here as tributaries, Lye brook, Bourne brook, Glebe brook, and Mill brook. These streams afford a great number of excellent mill privileges. The habitable parts of this township lie between the Green Mountains on the east and the Equinox mountain on the west. The latter is the highest summit in this section of the state, and is, according to the admeasurement of Capt. A. Partridge, 2915 feet above the site of the court-house in Manchester south village, and 3706 feet above tide water. Through the east part of the township runs a range of granular quartz from north to south. Contiguous and parallel to this on the west is

MANSFIELD.

a range of transition granular lime rock, and here are inexhaustible quantities of beautiful white marble, \$50,000 worth of which, is annually exported. The most interesting minerals are calcareous spar, stalactites, mica, feldspar, and specular oxyde of iron. On the farm of J. S. Petibone, is an extensive bed of agaric mineral and calcareous tufa. The soil is various, being primitive, diluvial and alluvial. The diluvial beds of sand are of great value in the sawing and manufacture of marble. On the east side of the Equinox mountain, upon a farm formerly belonging to the late Hon. Richard Skinner, is a cavern, which has been explored several rods in different directions, but its extent has never yet been ascertained. There are two pleasant villages called the north or Factory Point, and south village. The south village is pleasantly situated on elevated ground. It contains a bank, a jail erected in 1787 in connexion with a court house, an academy, built in 1818, an elegant brick court-house built in 1822, a meeting house, the Burr seminary,* several stores, taverns, mechanics' shops, &c. The town is divided into ten school districts, with school houses. There are 4 stores, 1 grist and 12 saw mills, 1 woollen factory, and 1 tannery. *Statistics of 1840.*—Horses, 320; cattle, 1,351; sheep, 7,989; swine, 691; wheat, bush. 1,481; oats, 9,145; rye, 1,083; buck-wheat, 2,073; Indian corn, 5,764; potatoes, 30,567; hay, tons, 3,553; sugar, lbs. 34,950; wool, 23,010. Population, 1,590.

MANSFIELD, a township in the south part of Lamoille county, is in lat. 44° 29' and long. 4° 13', and is bounded northerly by Sterling, easterly by Stow, southerly by Bolton, and westerly by Underhill. It is situated 20 miles northwest from Montpelier, and the same distance east from Burlington; was chartered June 8, 1763, containing 23,040 acres. Nov. 15, 1839, the western part of this township was annexed to Underhill. In the year 1800 this township contained 12 inhabitants. The settlement was commenced a short time previous. The eastern part of the township adjoining Stow, is an excellent tract of land, and to this the settlement is confined. The remaining part of the township is very mountainous and incapable of ever being settled. The eastern part is watered by two considerable branches of Waterbury river. The town is organized and has been several years represented in the General Assembly. The highest land in the state is in this town, the highest summit, called the Chin, be-

* See part second, page 168.

MANSFIELD MOUNTAINS.

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ing near the northwest corner. *Statistics of 1840.*—Horses, 37; cattle, 402; sheep, 870; swine, 190; wheat, bush. 623; barley, 12; oats, 528; rye, 88; Indian corn, 372; potatoes, 10,810; hay, tons, 599; sugar, lbs. 4,700; wool, 1,027. Population, 223.

MANSFIELD MOUNTAINS, extend through the township of Mansfield from north to south. They belong to the western range of the Green Mountains, and exhibit some of the loftiest summits in the state. From a distance, these mountains are thought to bear some resemblance to the face of a man lying on his back; and hence, the two most prominent summits are denominated the *Nose* and the *Chin*. The *Chin* is the highest land in Vermont, according to Capt. A. Partridge's admeasurement, and is 4,279 feet above tide water. The height of the *Nose* above tide water is 3,983 feet. According to the trigonometrical measurements of E. F. Johnson, Esq., the height of the *Chin*, is 4,359 feet, and of *Camel's Hump*, 4,220. See *Diagram, part I, page 3*.

MARLBOROUGH, a post town in the central part of Windham county, is in lat. 42° 53' and long. 4° 26', and is bounded north by Newfane and a part of Dover, east by Brattleboro' and a part of Dummerston, south by Halifax, and west by Wilmington. It lies 24 miles east from Bennington and 44 miles southwest from Windsor. The township is 6 miles square. It was chartered April 29, 1751, but the charter was forfeited in consequence of not complying with its requisitions. The proprietors urged as a reason for their neglect the intervention of the Indian and French war, and succeeded in getting their charter renewed by the same authority, New Hampshire, Sept. 21, 1761. The charter was given to one Timothy Dwight, and his associates, of Northampton, Mass., and its vicinity. The settlement was commenced as early as the spring of 1763, by Abel Stockwell, from West Springfield, Mass., and Thomas Whitmore, from Middletown, Ct. Whitmore came in by the way of Halifax, and settled in the south part of the town, and Stockwell by the way of Brattleboro', and settled in the eastern border. These families spent nearly a year in town, and endured many hardships, without any knowledge of each other, each considering his own the only family in town. Whitmore brought his provisions from Deerfield, Mass., on his back, distance from 20 to 30 miles. Mrs. Whitmore spent most of the winter of 1765 alone, her husband being absent in the pursuit of his calling, as a tinker. Mrs. Whitmore was very useful to the

settlers, both as a nurse and a midwife. She possessed a vigorous constitution, and frequently travelled through the woods on snow shoes, from one part of the town to another, both by night and day, to relieve the distressed. She lived to the advanced age of 87 years, officiated as midwife at more than 2,000 births, and never lost a patient. The first town meeting on record was held May 8, 1775, and William Mather was the first town clerk. Another meeting was held on the 22d of the same month, to know the minds of the people with respect to the impending war with Great Britain. At this meeting they passed the following resolutions: "*Resolved*, We will, each of us, at the expense of our lives and fortunes, to the last extremity, unite and oppose the last cruel, unjust and arbitrary acts of the British Parliament passed for the sole purpose of raising a revenue, &c. *Resolved*, We will be contented and subject to the Hon. Continental Congress in all things which they shall resolve for the peace, safety, and welfare of the American colonies." When the news of the Lexington battle reached here, several young men shouldered their guns and hastened to the field of action. In 1777, Capt. Francis Whitmore was sent as a delegate to the convention at Windsor, and in 1778 Dr. Samuel King was sent as the first representative to the legislature, which met that year at Windsor. The Congregational church in this town was organized by Rev. Joseph Lyman, D. D., of Hatfield, Mass., Oct. 20, 1776. It consisted, at first, of nine male and eight female members. On the 9th of December, 1778, the Rev. Gershom C. Lyman, D. D. was ordained and settled over this church and society, he having preached here about one year before this time. Mr. Lyman continued ably and faithfully to discharge the duties of his sacred office till the time of his death, which took place on the 13th of April, 1813, in the 61st year of his age, and the 35th of his ministry. In his last sickness he was an example of patience and resignation, and died in the full faith of that gospel which he had preached, and in the full assurance of a happy immortality. Rev. Ephraim H. Newton was then settled over the church and society, and continued until about the year 1833. Since that time Rev. Benjamin H. Pitman, Rev. Josiah Peabody, and Rev. Elisha Smith, have been their ministers at different times; the latter being their present minister. The first meeting house was built in 1779. The Congregationalists erected a new meeting house in 1820. In 1822 the old meeting house was taken

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MARLBOROUGH.

down, and a commodious town house erected. There is also a respectable Baptist church and society, partly in this town and partly in Newfane. A Baptist meeting house was built here in 1815. Rev. Phineas Howe is their pastor. The Universalists convene at the town house, and have preaching some part of the time, from ministers abroad. Centre mountain is a considerable elevation, and is so called on account of its being situated near the centre of the township. Allen's pond in the northeast part of the town, is about $1\frac{1}{2}$ mile long and three quarters of a mile wide. South pond, in the south part, is about the same size. It is watered by the west branch of West river, Whetstone brook, and Green river, which rise here and afford several valuable mill seats. The only mill privilege which is permanent through the year, is on the outlet of South pond. On this stream is situated the fulling mill and carding machine owned by Dan Mather, Esq., also the mill for manufacturing starch, owned by Messrs Cotton and Dan Mather, Esqrs. The soil is, in general, rich and deep, and produces good crops of grass, rye, corn, wheat, oats, barley, flax, potatoes, apples, pears, plums, and various wild fruits. In 1838 the females formed themselves into an association for the purpose of making clothing to send to foreign nations, and in 1840 they also formed themselves together and purchased a library, for the purpose of improving their minds by reading moral and religious books. Each of said societies succeeded very well, and probably much good will arise therefrom. The timber is beech, birch, maple, bass, spruce, oak, hemlock, pine, fir, ash, and cherry. The minerals are sulphur, serpentine, garnets, steatite of different varieties, clay, sulphuret of iron, and sulphuret of copper. There are some springs impregnated with sulphur and iron. Sometime since there was a stone dug out of the earth in the south part of the town, in the shape and form of a tapping iron, which is supposed was dropped by the Indians when the town was nothing but a wilderness, and before it was inhabited by white people. During the year 1780 the inhabitants, in this vicinity, were in continual apprehension of a hostile visit from the Indians and tories, and meetings were held to concert measures for the common safety, whereupon it was agreed that every able bodied man should hold himself in constant readiness to defend the settlements. On the eve of the last day of October, in the same year, after a clear and pleasant day, a violent snow storm commenced, and this evening Mr. Stockwell,

of this town, received a letter from Col. Sargeant, of Brattleboro', calling upon the inhabitants to defend themselves against the Indians and tories, who had reached Newfane.* Chs. Phelps, a lawyer from Hadley, Mass., moved into town in 1764, and his was the third family here. During the controversy with New York, his son Timothy was high sheriff of the county of Cumberland. About the year 1768, two young women, of Irish descent, by the name of McLaughlin, came to this town, and resided with Mr. W. Clark. In the fall of the same year one of them went out towards evening, after the cow, and was probably lost, and perished in the woods, or devoured by wild beasts, as she never was afterwards heard of. In 1769 and '70, Col. Wm. Williams, who distinguished himself in the Bennington battle, moved from Northboro', Mass., accompanied by Capt. Nathaniel Whitney and his two brothers, Samuel and Jonas, from Shrewsbury, Mass. The latter has been a representative of the town in the general assembly seven years, 32 years a justice of the peace and 47 years a deacon of the church, and now resides in the state of Ohio. In 1770, the settlement was considerably augmented by emigrants from Massachusetts and Connecticut, and about this time meetings were established for religious worship, but they had no preaching in town for several years. In 1771 the Rev. Abner Reeve, of Brattleboro', married the first couple (Perez Stockwell and Dinah Fay) in this town. James Ball died here in December, 1762, aged 26. This was the first death known to occur in town. The same year, Col. Williams erected a saw mill, which was the first mill built in town. Capt. Nathaniel Whitney was a celebrated hunter. In 1773 he killed a bear, a little west of this township, which weighed, after being well dressed, 466 pounds. Of bears and deer, Capt. Whitney killed more than 100 of each. He also killed one moose and 14 wolves. Rev. Abner Reeve preached the first sermon ever preached in town in 1774, from Mark xvi. 15. The first physician in town was Samuel King. The following are those who have since practised here, viz: Docts. Morgan, Wood, Torrey, Baldwin, Percival, Taylor, Greenleaf, Ransom, Smith, Pulsipher, and Ebenezer Tucker. The latter has practised in town for more than 20 years, and has had great success. A stage runs through this town daily

* For the particulars respecting this alarm, see Part 2d, p. 70, and also article, Athens, Part third. There is a discrepancy in the dates, but both undoubtedly have reference to the same event.

MARSHFIELD.

MEMPHREMAGOG LAKE.

from Brattleboro' to Wilmington. There are, in town, 13 school districts and 13 school houses, 9 saw, 2 grist and 1 fulling mill, 1 carding machine, 1 store, 1 tannery, 2 wheelwrights, 3 blacksmiths and 2 shoemakers. *Statistics of 1840.*—Horses, 201; cattle, 2,067; sheep, 3,925; swine, 936; wheat, bus. 857; barley, 438; oats, 5,040; rye, 911; buckwheat, 171; Indian corn, 2,982; potatoes, 51,648; hay, tons, 3,695; sugar, lbs. 23,545; wool, 8,439. Pop. 1,027. J.W.&W.S.N.

MARSHFIELD, a post township in the east part of Washington county, is in lat. 44° 19' and long 4° 38', and is bounded northerly by Cabot, easterly by Peacham and Harris' gore, southerly by Plainfield, and westerly by Calais and a part of Montpelier. It lies 12 miles northeast from Montpelier, and 16 miles southwest from Danville. This township was granted to the Stockbridge tribe of Indians, October 16, 1762, and chartered to them June 22, 1790, containing 23,040 acres. The township was purchased of the Indians by Isaac Marsh, Esq., of Stockbridge Mass., from whom the town derives its name, for 140*l.* lawful money, and was deeded to him, July 29, 1789. The deed was signed by 18 Indians, who were then residents of New Stockbridge, in Montgomery county, N. Y. The improvements were commenced here in the spring of 1790, by Martin and Calvin Pitkin from East Hartford, Conn. They left the town in the fall, and returned again the succeeding spring, accompanied by Gideon Spencer. Thus, they continued to spend the summer here, and abandon the township in the winter till 1794. This year, Caleb Pitkin, Gideon Spencer and Aaron Elmore moved their families here in the winter, while the snow was more than four feet deep. In the summer they were joined by Ebenezer Dodge and family. John Preston Davis, son of Ebenezer Dodge, was born September 17, of this year, and was the first child born in town. March 1, 1795, Joshua, Stephen and Nathaniel Pitkin and Solomon Gilman moved into town. At this time, there were five families, consisting of 20 persons here. The town was organized, March 10, 1800. Stephen Pitkin built the first saw mill, in 1802, and the first grist mill in 1818. The religious denominations are Congregationalists, Baptists, Methodists and Christians. Elder John Capron of the Christian order is the only resident minister. A union meeting house was built here in 1826. There are in town 7 persons over 85 and one over 97 years old. Winooski river runs through the township in a southerly direction, and is the

only stream of consequence. The surface of this township is very uneven. That part of it west of the river is timbered with hard wood, and the soil is good. East of the river the timber consists principally of evergreens, and the surface is broken, wet and stoney. The eastern part is considerably unsettled. This town is watered principally by Winooski river. In this stream is here a fall, said to be 500 feet in the distance of 30 rods. A good view of it may be had from the road leading from Marshfield to Cabot, and it is worthy the attention of the traveller. In the northeast part of the town is a considerable natural pond. The rocks are principally slate and granite. In the north part of the town is a small village, containing a meeting house, 1 tavern, 1 store, 1 saw and 1 grist mill, 1 clover mill, and 1 clapboard and shingle machine. There are in town 13 school districts, 11 school houses, 1 grist, 1 clover and 6 saw mills, and 1 carding machine. *Statistics of 1840.*—Horses, 227; cattle, 2,187; sheep, 4,863; swine, 525; wheat, bus. 2,351; barley, 93; oats, 14,466; rye, 451; buckwheat, 1,477; Ind. corn, 3,202; potatoes, 50,256; hay, tons, 3,966; sugar, lbs. 14,790; wool, 6,731. Pop. 1,156.

MARVIN'S GORE, annexed to the east part of Highgate, October 23, 1806.

McINDOES FALLS, a considerable fall in Connecticut river at the head of boat navigation on that stream, and opposite the southeast corner of Barnet.

McQUAM BAY, a large open bay in the western part of Swanton.

McQUAM CREEK, a small, sluggish creek connecting Missisco river with McQuam bay, and separating Hog Island from the main land.

MEDWAY. Parker's gore was annexed to this township, November 7, 1804, and the whole incorporated into a township by the name of Parkerstown. *See Parkerstown.*

MEMPHREMAGOG LAKE, is 30 miles in length, and two or three miles wide. It lies mostly in Canada, only seven or eight miles of the south end extending into Vermont. This lake is situated about half way between Connecticut river and lake Champlain, and that part within this state lies between the towns of Derby and Newport. A bay extends south into Orleans. This lake covers about 15 square miles in Vermont, and receives from this state Clyde, Barton and Black river. The waters of this lake are discharged to the north by what is called Magog Outlet, into the river St. Francis, and through that into St. Peter's lake, about 15 miles below the mouth of the river Richelieu. Up-

MENDON.

MIDDLEBURY.

on the west side of a small uninhabited island situated at the mouth of Fitch's Bay, and about two miles north of Canada line, is a considerable quarry of novaculite known by the name of the "Magog Oil Stone." The vein of novaculite is from two to eight feet wide where it has been quarried, and the length of the quarry is several hundred feet. It is situated beneath a cliff, and, at the top, is interspersed with quartz. The vein of novaculite runs parallel with the cliff and lake shore, and is so low that it is usually overflowed by the rising of the lake in spring and autumn. Large quantities of the "Magog Oil Stone" have been prepared for use and vended in various parts of the United States. The Indian words from which the name of this lake was derived, were *Mem-plow-bouque*, signifying a large expanse of water. On the east side of this lake the country is beautiful, with an easy, rich soil; on the west it is broken, and less productive.

MENDON, a township in Rutland county, is in lat. 43° 37' and long. 4° 10', and is bounded northerly by Chittenden, easterly by Sherburne, southerly by Shrewsbury, and west by Rutland. It lies 47 miles south from Montpelier, and 25 northwest from Windsor. It was chartered to Joseph Banker and others, Feb. 23, 1781, by the name of Medway. Parker's gore was annexed to it, and the whole incorporated into a township by the name of Parkerstown, Nov. 7, 1804; and Nov. 6, 1827, the name was altered to Mendon. The town was organized March 11, 1806, and John Page was first town clerk. This township lies mostly on the Green Mountains, and much of it is high and cold land, and incapable of settlement. There are some good farms along the western border, and good grazing land in other parts. The turnpike from Bethel to Rutland passes through this township; also the direct road from Woodstock through Bridgewater, to Rutland. The town contains 3 saw mills and 1 tannery. *Statistics of 1840.*—Horses, 107; cattle, 526; sheep, 1,731; swine, 221; wheat, bus. 385; oats, 1,949; rye, 266; buckwheat, 188; Indian corn, 1,658; potatoes, 7,897; hay, tons, 1,013; sugar, lbs. 11,961; wool, 4,533. Population, 545.

MERRIT'S RIVER. See *Joe's brook*.

MIDDLEBURY, a post and shire town in Addison county, is in lat. 44° and long 3° 57', and is bounded north by New Haven and Bristol, east by Ripton, south by Salisbury, and west by Cornwall and Weybridge. It lies 33 miles south from Burlington, 31 in a right line southwest from Montpelier, and 80 north from Ben-

nington. It was chartered Nov. 2, 1761, and now contains about 24,000 acres. The first clearing was commenced by Col. John Chipman, in 1766, on the north bank of Middlebury river, where the west and centre road from Salisbury now unite. At this time there was no dwelling-house in the state, on the west side of the mountains, north of Manchester, distant 60 miles from Middlebury. The prospects were so discouraging that Mr. C. soon returned to Connecticut and did not visit the township during the seven succeeding years. In 1773, Col. Chipman and the Hon. Gamaliel Painter, from Salisbury, Ct. determined to risk their all in effecting a settlement of this township. They came into the town in May of this year with their families, and threw up a small log hut for a shelter from the weather. Benjamin Smalley had previously commenced and built a log house, which was the first house built in town. Chipman located himself on the lot which he had commenced clearing seven years before, and Painter erected his habitation near the road leading to Salisbury, on the west bank of Middlebury river, near a spot of alluvial land, which had been an Indian encampment. On this spot are found numerous articles of Indian manufacture, such as arrows, hammers, &c. some being made of flint, others of jasper. A pot composed of sand and clay, of curious workmanship and holding about 20 quarts, was dug up here nearly entire in 1820. During the year 1773, the number of families was increased to six or seven, and four more joined the settlement the succeeding year, one of which was on the west side of the creek, which was then Cornwall. Before the revolutionary war there were 13 families within the charter limits of Middlebury, and 8 others in that part of Cornwall which was afterwards annexed to Middlebury. In June 1776, all these, with the exception of Daniel Foot and Benj. Smalley, left the town, and these, after being pillaged by the Indians, left in September, but returned in the following winter and remained till the spring of 1778. The Indians frequently visited the place in the absence of the settlers, and destroyed or carried off all the moveable property which fell in their way. In 1783, Smalley, Thayer, and Jonathan Chipman returned with their families. They were followed by eight or nine families the next year, and by several more the succeeding year. The first child born here was a son of Eleazer Slawson in December 1773, and the first person who died was Zerah Smalley, who died in December 1776, aged 18. In 1784 Daniel Foot erected a build-

MIDDLEBURY.

MIDDLEBURY.

ing on the west side of the creek for a saw and grist mill, both of which went into operation the next year, and in 1787 he united the two sides of the river by a bridge. The first saw mill was erected in 1774 on the east side of the creek, by Abisha Washburn. The first house was built within the present limits of the village in 1783 by John H. Johnson on the west side of the river, and the second in 1787 by Simeon Dudley on the east side. The latter was soon after burnt. The early settlers were mostly from Connecticut. Middlebury was constituted a shire town in 1791, and the court-house was erected in 1796. The town was organized March 29, 1786, and Joshua Hyde was first town clerk. The congregational church in this town was organized September 5, 1790, and at first consisted of seven male and five female members. On the 11th of November of the same year the church was placed under the pastoral care of the Rev. John Barnet, who was dismissed March 31, 1795. The Rev. T. A. Merrill was settled over the church, December 19, 1805, and is their present pastor. A meeting house was soon after erected, 78 by 58 feet on the ground, and a bell procured for it in 1821. The following is a list of the most remarkable revivals of religion and the numbers added to this church at the several periods. The first was in 1801, when the church was increased from 30 to 80 members. In 1806 and 7, 122 were added, in 1809 and 10, 112, in 1812, 35, in 1816 and 17, 140, and in 1821, 100. Since 1821 there have been several other revivals, particularly in 1825, 1830, 1834 and 1839. The total number of members admitted to this church from the time of its organization up to June 1840, 1,318. The number of resident members at that time was 515. A methodist class was formed in this town in 1809. They erected their first house of worship in 1812. Their present house, 69 by 45 feet, was finished in 1838. This church consists of 240 communicants, and is constantly supplied by a stationed preacher. The Baptist church was organized Dec. 10, 1809. Their first pastor was the Rev. Nathaniel Hendrick, from 1810 to 1817, second, Rev. Isaac Buckland, from 1818 to 1820. Since 1820 they have been supplied by temporary engagements. Their house of worship is 65 feet by 32, and the number of communicants 66. The Episcopal church, by the name of *St. Stephen's Church*, was organized December 5, 1810, the ministers of which have been Rev. P. Adams, from 1811 to 1814; Rev. S. S. Safford, 1814 to 1816; Rev. Geo. Leonard, 1817; Rev. B. B.

Smith, 1824 to 1828; Rev. S. A. Crane, 1831 to 1835; Rev. S. R. Crane, 1835 to 1837; Rev. Wm. H. Hoit, 1837 to 1838; Rev. J. W. Diller, 1838, and is the present rector. Their church, which is of stone, 72 feet by 52, was finished in 1827. Communicants 75. A Roman Catholic church, 64 by 44 feet, was built here in 1840. The only streams of consequence in this township, are Otter creek, which runs through the western part, and Middlebury river, which runs through the south part into Otter creek. At Middlebury village are some of the best mill privileges, and some of the finest and most extensive manufacturing establishments in the state. This township is very level, excepting a strip of one mile wide along the east side, which extends on to the Green Mountains. Separate from the Green Mountains, Mount Nebo or Chipman's hill is the most considerable elevation and is 439 feet above the level of Otter creek below the falls. A large proportion of the township is arable and fertile land, producing good crops of grain and grass. There are, however, some small patches which consist of a stiff clay, and are not so productive. The clay here contains a considerable proportion of the carbonate of lime, and is therefore unsuitable for making brick. The bricks, when burnt, are handsome, but when they are moistened the lime slacks and they crumble to pieces.—Specimens of schorl, garnet, hornblende and jasper are occasionally found. Nearly on the line between this township and Salisbury, is a bed of the sulphuret of iron, connected with the carbonate of lime. It is thought to exist in large quantities and has a powerful effect upon the magnetic needle. The magnetic oxide of iron is also found in several places, but not plentifully. Calcareous tufa is found two miles east of the village, and epidote on Mount Nebo. Limestone suitable for making lime is found in all parts. A bed of marble, extends over a considerable part of the township, and shows itself above the surface in more than a hundred different places. The marble was discovered in 1804 by the Hon. E. W. Judd, and the manufacture of it was commenced in 1806, on an extensive scale. The machinery is propelled by water and puts in motion 65 saws. In 1809 the "Middlebury Marble Manufacturing Company" was incorporated. In the years 1809 and '10, 20,000 feet of marble slabs were sawn at this manufactory, amounting to \$11,000. The marble is quarried within a stone's throw of the manufactory and is of various colors. Since the company was incorporated the annual amount of the manufac-

MIDDLEBURY RIVER.

MIDDLESEX.

MIDDLETOWN

tures of this article has been from \$6,000 to \$8,000. The water in this township, is generally hard, unsuitable for washing, and many kinds of cookery. A mile and a half east from the meeting-house is a spring, the waters of which are slightly chalybeate. *Middlebury village* is situated on both sides of Otter creek at Middlebury falls. The latitude of the court-house here, according to Prof. Hall, is 43° 49' 51" and its longitude 73° 10' 15" west from Greenwich. In 1793, all the buildings in this village amounted to 62, the most of which were built of logs. In 1813, they amounted to 346, 146 of which were dwelling-houses. In 1822, the total number of buildings was 604, 196 being dwelling-houses, 6 of brick, the rest of wood. The number has since been greatly increased. The public buildings are 5 churches, 3 college edifices, an academy, court-house and jail. There are 14 mercantile stores, 2 woollen and 1 cotton factory, a great variety of other machinery and a large number of mechanics' shops, embracing all such as are usually found in country villages. There is another thriving little village called *East-Middlebury*, situated on Middlebury river. It contains a store, several mills and shops, and many enterprising mechanics. Middlebury has been somewhat distinguished for its literary institutions. An account of Middlebury College has already been given in part second, page 152. The other institutions, besides elementary schools, are an academy and female seminary. *Statistics of 1840.*—Horses, 470; cattle, 3,820; sheep, 20,400; swine, 1,828; wheat, bush. 2,310; oats, 10,625; rye, 920; buck-wheat, 794; Indian-corn, 7,500; potatoes, 23,023; hay, tons, 8,900; sugar, lbs. 1,200; wool, 52,300. Population, 3,161.

MIDDLEBURY RIVER, rises in Hancock, passes through Ripton, and directing its course westerly, mingles its waters, in the south part of Middlebury, with those of Otter creek. The turnpike from Vergennes to Bethel is, for a considerable distance, built on, or near, one of the banks of this stream, which presents to the eye of the traveller a number of highly romantic prospects. A large proportion of the land contiguous to this stream, after it leaves the mountain, is alluvial, and there are some small patches of alluvial land among the mountains. The length of this stream is about 14 miles, and it affords several mill privileges.

MIDDLE HERO.—Name altered to Grand Isle, Nov. 5, 1810. See *Grand-Isle*.

MIDDLESEX, a post town in the central part of Washington county, is in lat. 44°

20' and long. 4° 22', and is bounded north-erly by Worcester, easterly by Montpelier, southerly by Moretown, from which it is separated by Winooski river, and westerly by Waterbury. It lies 30 miles east from Burlington, and was chartered June 8, 1763, containing 23,200 acres. Mr. Thomas Mead was the first settler of this township, and also the first settler of Washington county. He began improvements in Middlesex in 1781 or '82, and the next year moved his family here from Chelmsford, Mass. Mr. Harrington moved his family into town the year following, and two Messrs. Putnams the year after. The town was organized about the year 1788. Mr. Wilson was first town clerk, and the Hon. Seth Putnam was first representative. There is a small Methodist and Freewill Baptist society here, and some Congregationalists and Universalists. There have been no very remarkable instances of longevity. Mrs. M'Elroy, died here in 1822, but little short of 100 years of age. The south part of this township is watered by Winooski river, which furnishes here one of the best stands for mills in the county. The north branch of this river runs across the northeast corner of the township. There are also several brooks on which saw-mills are erected. The township is uneven, but the only mountain of consequence lies along the line between Middlesex and Waterbury, and is called the Hogback. The timber is such as is common to the mountain towns, and the soil generally good. There are some fine intervalles along the river, but the flats are not extensive. The channel worn through the rocks by Winooski river, between this township and Moretown, is a considerable curiosity. It is about 30 feet in depth, 60 in width, and 80 rods in length, the rocks appearing like a wall upon each side. Over this chasm a bridge is thrown, which is perfectly secure from floods. But little is yet known of the mineralogy. Some fine specimens of rock crystal have been picked up. On the bank of the Winooski river at the falls, near the middle of the south line of the township is a flourishing little village, containing a handsome meeting house, a post-office, 1 store, 1 tavern, 1 grist, 1 oil and 1 saw-mill. *Statistics of 1840.*—Horses, 225; cattle, 1,018; sheep, 3,829; swine, 344; wheat, bush. 2,182; barley, 510; oats, 11,227; rye, 483; buck-wheat, 893; Indian-corn, 3,708; potatoes, 32,395; hay, tons, 3,206; sugar, lbs. 18,117; wool, 5,045. Population, 1,279.

MIDDLETOWN, a post town in the south western part of Rutland county, is in lat.

MILES' RIVER.

MILLER'S RIVER.

MILTON.

43° 28' and long. 3° 57', and is bounded northwesterly by Poultney, northeast by Ira, southeast by Tinmouth, and southwest by Wells. It lies 70 miles south from Burlington and 41 north from Bennington. This township was formed by taking 3,510 acres from the northwest part of Tinmouth, 6,118 from the northeast part of Wells, 2,388 from the southeast part of Poultney, and 1,825 from the southwest part of Ira, making, in the whole, 14,841 acres. It was called Middletown on account of the manner in which it was formed, being in the midst of the four towns which bound it. The settlement was commenced and mills were erected a short time before the revolution, by Thomas Morgan and some others. Mr. Morgan is now living at the advanced age of 94, and is the oldest person in town. The settlers moved back to Connecticut during the war, but returned again as soon as it was over. The town was organized in 1786, and Joseph Rockwell was first town clerk. There are here three religious societies, Congregationalists, Baptists and Methodists. The Congregational church was organized about 1784. The Rev. Henry Bigelow was settled over it from Sept. 18, 1805, till his death June 26, 1832, and the Rev. Guy C. Sampson from Feb. 18, 1834, to July 15, 1835. The Rev. John A. Avery, the present pastor, was settled Feb. 10, 1836. Members 126. Elder Sylvanus Haynes was for a long time minister of the Baptist church. The minister of the Methodist church is the Rev. John Fitch. The Congregationalists built a meeting house about the year 1794, the Baptists about 1806, and the Methodists in 1837. John Burnham lived in this town to the age of 98 years. The epidemic of 1813 was very mortal here. The surface of the township is considerably broken. Poultney river rises in Tinmouth, and runs westerly through this township, affording three good mill privileges. The soil is a gravelly loam, and the timber mostly maple and beech. Near the centre of the township is a small but pleasant village, containing 3 meeting houses, 2 stores, 1 tavern, and a number of mechanics' shops. There are here 10 school districts, in which are 400 scholars, 2 grist and 3 saw mills. *Statistics of 1840.*—Horses, 270; cattle, 1,524; sheep, 6,636; swine, 689; wheat, bus. 1,108; oats, 3,486; rye, 964; buckwheat, 384; Ind. corn, 3,057; potatoes, 18,040; hay, tons, 2,947; sugar, lbs. 9,820; wool, 17,640. Population, 1,057.

MILES' RIVER rises near the west corner of Lunenburg, and, pursuing a southerly direction into Concord, where it re-

ceives the stream from Miles' pond, which is a considerable body of water, bends its course easterly, and falls into Connecticut river by a mouth seven or eight yards wide.

MILL BROOK. *See Windsor.*

MILLER'S RIVER rises in Sheffield, runs through a part of Wheelock; and falls into the Passumpsic, near the centre of Lyndon. It is, generally, a rapid stream, and affords some good mill privileges, particularly in Wheelock, where there is a considerable fall.

MILTON, a post town in the northwestern corner of Chittenden county, is in lat. 44° 38' and long. 3° 55', and is bounded north by Georgia, east by Westford, south by Colchester, and west by lake Champlain. A sand bar extends from the southwest corner of the township to South Hero, which renders the lake fordable with safety the greater part of the year. Milton lies 12 miles north from Burlington, 40 northwest from Montpelier, and 12 south from St. Albans. It was chartered June 8, 1763, containing 27,616 acres. The settlement of the township was commenced Feb. 15, 1782, by Wm. Irish, Leonard Owen, Amos Mansfield, Absalom Taylor and Thos. Dewey; and they were soon after joined by Gideon Hoxsie, Zebadiah Dewey, Enoch and Elisha Ashley, and others. The first settlers suffered many privations and hardships, but there is nothing in the early history which is peculiarly interesting. The town was organized March 25, 1788, and Enoch Ashley was first town clerk. It was represented the same year by Aaron Matthews, who was also the first justice of the peace. The religious denominations are Congregationalists, Methodists, Baptists and Episcopalians. The Rev. Joseph Cheeny was ordained over the Congregational church and society in 1807, and dismissed in 1817. The Rev. James Dougherty was settled about 1836, and is their present minister. The Methodists are supplied by circuit preachers, and by local preachers in the vicinity. The Baptists reside principally in the southwest part of the township. There are three meeting houses, one in the westerly part of the town, and two at Milton falls, belonging to the Congregationalists and Methodists, the two latter finished in 1841. This township is watered by the river Lamoille, which runs through it from northeast to southwest, and by several small streams, which afford numerous mill seats. In the Lamoille are several considerable falls. The *Great falls* on the river, seven miles from its mouth, and a little to the southwest of the

MISSISCO BAY.

MISSISCO RIVER.

MONKTON.

centre of Milton, are a considerable curiosity. In running 50 rods, the whole river falls about 150 feet. Near the middle of the cataract is a small island, upon each side of which the water rushes down with the greatest violence, rebounding from rock to rock, tossing its spray into the air, and stunning the astonished spectator by its successive concussions and incessant roar. These falls are often visited by the curious. The surface of this township is gently diversified with hills and vallies, but contains no mountains of consequence. *Cobbles hill* in the south, and *Rattlesnake hill*, in the north part, are the most remarkable. They rise 4 or 500 feet above the adjacent plains, and afford a fine prospect of the lake and surrounding country. The soil is various, being, in some parts, sandy pine plains, in others clay, and in others a warm loam. The lumbering business has, heretofore, engrossed much of the attention of the inhabitants; but, the pine timber being mostly exhausted, their chief attention is now given to agriculture. The rocks here are mostly limestone. Iron ore is found here in considerable quantities, and is thought to be of good quality. On the bank of the Lamoille is a small cavern. There is a thriving little village at Milton falls, which afford excellent sites for mills, containing 2 meeting houses, a paper and other mills, a tavern, stores and mechanics' shops. There is another pleasant little village, 2 miles west of the falls, called *Checker-Berry*. The town contains three meeting houses, 9 stores, 1 paper mill, 2 grist, 2 saw and 3 fulling mills and 3 tanneries. *Statistics of 1840.*—Horses, 482; cattle, 2,863; sheep, 16,600; swine, 1,617; wheat, bus. 4,425; oats, 11,266; rye, 10,288; buck-wheat, 1,230; Indian corn, 16,603; potatoes, 49,791; hay, tons, 5,973; sugar, lbs. 19,204; wool, 31,686. Population, 2,136.

MINDEN. Name altered to Craftsbury, October 27, 1790. *See Craftsbury.*

MINEHEAD. Name altered to Bloomfield, Nov. 9, 1830. *See Bloomfield.*

Missisco. Name altered to Troy, October 26, 1803. *See Troy.*

Missisco Bay is a large arm of lake Champlain, which extends into Canada between Swanton and Highgate on the east, and Alburgh on the west. Its width from east to west, on Canada line, is about five miles, and it extends four or five miles into Canada. This bay covers an area of about 35 square miles.

Missisco* River rises in Lowell, and,

pursuing a northeasterly course through a part of Westfield and Troy, crosses the north line of the state into Potton in Canada, where it receives a large stream from the northeast. After running several miles in Canada, it returns into Vermont about a mile west from the northeast corner of Richford. Thence it runs southwesterly through the corner of Berkshire, where it receives Trout river, into Enosburgh. It then takes a westerly course through Sheldon into Highgate, where it bends to the south into Swanton, and, after performing a circuit of several miles in that town, returns into Highgate, and, running northwesterly, falls into Missisco bay near Canada line. There are several falls and rapids in this stream, but the current is, generally, moderate, and the river wide and shallow. It affords a considerable number of valuable sites for mills, and the alluvial flats, along its margin, are extensive and very fertile. Besides those above mentioned, Black creek and Taylor's branch are its most considerable tributaries. The length of this river, including its windings, is about 75 miles, and it receives the waters from about 582 square miles in Vermont. This river is navigable for vessels of 50 tons burthen, six miles, to Swanton falls.

MOLLY'S POND. *See Cabot.*

MONKTON, a post town in the north part of Addison county, is in lat. 44° 13' and long. 3° 55', and is bounded north by Hinesburgh and Charlotte, east by Starksborough, south by Bristol, and west by Ferrisburgh. It lies 18 miles southeast from Burlington, and 27 west from Montpelier. It was chartered June 24, 1762, and contains 24,000 acres. This township was settled in 1774, by John and Ebenezer Stearns, Barnabas Burnham and John Bishop. They left during the war, but returned in 1784. There are no large streams in this township. The western part is watered by Little Otter creek, and the eastern part by Pond brook, which rises from a considerable pond nearly on the line between Monkton and Bristol,

miss, signifying much, and *makeca*, grass—abounding in grass; and others, from *missi*, much, and *kiscoe*, waterfowl. Both of these names are descriptive, as there are here extensive tracts of wild grass, and both the bay and the lower part of the river are favorite resorts for waterfowl. The name is usually pronounced *Missiscoe*, and my reason for spelling it *Missisco*, besides its near conformity to the original, is the unsettled orthography of the word, which may be seen by the following various spellings, all of which are copied from printed books, or periodicals.

Missisquo	Missisquoi	Missiskow	Masiska
Missisqui	Missisco	Missiskay	Michisconi
Missisqua	Missisconi	Missiskoy	Michisconie
Missisquay	Missiscoe	Missiskone	Michisqui
Missisquel	Missiski	Missiskoui	

* This name is doubtless derived from the Indians, but there is not perfect agreement with regard to its signification. Some consider it as coming from

MONKTON.

and runs north through this township into Lewis creek in Hinesburgh. Lewis creek also runs a short distance in the northeastern part. These streams afford but few mill privileges. Monkton pond lies in the north part of the township, and is about a mile in length and half a mile wide. A mountain called the Hogback, extends along the eastern boundary of the township, and there are several other considerable elevations. "Iron ore is found in the south part of this township in large quantities. Ochrey varieties occur, but it is mostly the hematitic brown oxyde. The color of the surface of this ore is a velvet black, and that of the interior a brownish black. Its structure is fibrous and commonly radiated. This ore makes excellent iron, and is extensively manufactured at Bristol and other places. Connected with the iron ore, is found the black oxyde of manganese. About a mile north of the iron ore bed, on the east side of a ridge of land running north and south, is an extensive bed of kaolin, or porcelain earth. It is white, sometimes grayish white; dry to the touch, and absorbs water with rapidity. It is evidently decomposed feldspar, or rather, graphio granite, as these substances are found in the bed, in all stages of decomposition, from the almost entire stone, down to the finest and purest porcelain earth. It might be manufactured into the best China ware. The quantity is immense, sufficient to supply the world with this ware for centuries. By mixing this earth with common clay in different proportions, various kinds of pottery are produced." "In the south part of this township is a pond, curiously located on the summit of a considerable hill. In the northwestern part is a remarkable cavern. The orifice, by which it is entered, is at the bottom of a large chasm in the rocks on the side of a small hill. After descending about 16 feet, you arrive at a room 30 feet long and 16 wide. From this is a passage leading to a second apartment, which is not quite so large but more pleasant." This town contains three meeting houses, 1 grist and 3 saw mills, 3 stores and 1 tannery. *Statistics of 1840.*—Horses, 285; cattle, 1,660; sheep, 6,260; swine, 989; wheat, bush. 1,840; oats, 11,038; rye, 1,060; buckwheat, 560; Ind. corn, 7,430 potatoes, 39,340; hay, tons, 5,708; sugar lbs. 9,340; wool, 18,940. Population, 1,310.

MONTGOMERY, a post town in the eastern part of Franklin county, is in lat. 44° 52' and long. 4° 23', containing 23040 acres, or 36 square miles. It lies 42 miles north from Montpelier, and 41

MONTGOMERY.

northeast from Burlington. It is bounded north by Richford, east by Westfield, south by Lowell and Avery's Gore, and west by Enosburgh. It was granted March 13, 1780, and chartered October 8, 1789, to Stephen R. Bradley and others. Capt. Joshua Clap,* a respectable revolutionary officer, removed his family from Worcester county, Mass., into this town, in March, 1793, and this was for two years the only family in town. Hon. Samuel Barnard, Reuben Clap and James Upham, Esq. all from Mass., were among the earliest settlers. The Rev. Joel Clap, of Woodstock, was the first person born in this town—Sept. 4, 1793. He was educated, studied his profession and preached the first fast day, the first thanksgiving, and the first mother's funeral sermons which were preached in this town. The first town meeting was held and the town was organized, Aug. 12, 1802. Samuel Barnard, Esq. was first town clerk. The prevailing denominations of Christians are Congregationalists, Episcopalians, Baptists, and Methodists. The Congregational church was organized Aug. 12, 1802, over which the Rev. Avery Ware was settled from Jan. 20, 1825, to July 1830. This church consists of about 30 members. The Episcopal church was organized about 1819 by the name of *Union Church*. The ministers have been the Rev. Joel Clap, the Rev. Jordan Gray, the Rev. Richard Peck, the Rev. Lewis McDonald, the Rev. Josiah Obear, and the Rev. Alexander H. Cull, who is the present minister. Communicants 71. The public buildings are an Episcopal church built in 1829, and a Congregational meeting house, built in 1839, both of wood. This town is watered by Trout river, which is formed by the union of south and east branch, about half a mile west of the centre of the town. In its course it receives a number of tributary streams, and leaves the town near the northwest corner. On this river is a beautiful, fertile tract of intervale. Back from the river the land becomes mountainous, and less suitable for cultivation. The mill privileges, both on the river and its tributaries, are numerous and excellent. But few of them, however, are yet occupied. The timber is mostly hard wood, with some spruce, hemlock and fir. This town is divided into 6 school districts, 3 of which are furnished with good

* Capt. J. Clap was twin brother of Capt. Caleb Clap who settled in Greenfield Massachusetts. Both were officers of the same grade, and served through the war of the Revolution. The former died in 1811 and the latter in 1812. The resemblance between them is said to have been so perfect that they could be distinguished only by their dress.

MONROE.

MONTPELIER.

school houses. There are in town 2 mercantile stores, 1 tavern, 7 saw mills, 1 grist mill, with 3 run of stones, 1 fulling mill, 1 carding machine, and 1 starch factory. *Statistics of 1840.*—Horses, 130; cattle, 848; sheep, 1,608; swine, 165; wheat, bush. 1,110; oats, 1,194; barley 4; buckwheat, 582; Ind. corn, 1,344; potatoes, 26,425; hay, tons, 1,498; sugar, lbs. 23,875; wool, 3,797. Pop. 548.

MONROE, a post town in the north part of Washington county, is in lat. 44° 26' and long. 4° 35', and is bounded north by Hardwick, east by Cabot, south by Calais and west by Elmore. It lies 15 miles northeasterly from Montpelier, was granted November 6, 1780, and chartered, by the name of Woodbury, to Ebenezer Wood and others, August 16, 1781, containing 23,040 acres. The name was altered to Monroe, Nov. 5, 1838. But little settlement was made in this township before the year 1800. The whole population in that year amounted to 23. This township is watered by branches of Winooski and Lamoille rivers, and probably contains the greatest number of natural ponds of any township in the state. The town contains 1 grist and 2 saw mills. *Statistics of 1840.*—Horses, 104; cattle, 706; sheep, 2,011; swine, 226; wheat, bus. 826; barley, 155; oats, 4,695; rye, 391; buckwheat, 1,401; Ind. corn, 1,748; potatoes, 5,935; hay, tons, 1,437; sugar, lbs. 18,695; wool, 2,586. Population, 1,092.

MONTPELIER, a post and shire town in Washington county, and the seat of government of the state, is in lat. 44° 17', and long. 4° 25', and is bounded northerly by Calais, easterly by Plainfield and a small part of Marshfield, southerly by Berlin, from which it is separated by Winooski river, and a part of Barre, and westerly by Middlesex. It lies 36 miles southeast from Burlington, 103 northeasterly from Bennington, and 140 miles from Boston. This township was granted Oct. 21, 1780, and chartered to Timothy Bigelow and others, Aug. 14, 1781, containing 23,040 acres. It was rechartered Feb. 6, 1804. The first attempt to settle in this town was made in the spring of 1786; when Joel Frizzle, a hunter and trapper, felled a few trees, planted a little corn among the logs, after the Indian fashion, and erected a very small log cabin on the bank of Winooski river, in the southwest corner of this township, on the farm lately owned by Mr. John Walton, and moved his family, himself and wife, a little French women, into it from Canada, the same season. But the first permanent clearing and settlement was not made till

the spring after. On the 4th of May, 1787, Col. Jacob Davis and Gen. Parly Davis, from Charlton, Worcester co., Ms., with one hired man, and one horse, each loaded with pork, flour, beans, and other necessities, cooking utensils, and a set of surveyor's instruments belonging to Gen. Davis, the well known surveyor of a great part of this section of the state, having arrived the day previous from Brookfield, through Berlin, at the mouth of Dog river, and crossed over Winooski river to the house of Seth Putnam, near Montpelier line, cut out a road to the hunter's camp, on the site now occupied by the jail house in Montpelier village; when Col. Davis and his hired man commenced clearing up the meadow on the west side of the Little North Branch, now known as state street. They soon threw up a large log house, into which Col. D. moved his family the following winter, leaving Gen. Davis to proceed with the survey of the town, and to locate himself on a tract of land containing about 300 acres, at the centre of the town, on which he still resides. In 1788 Col. Davis erected a saw mill, and next year a grist mill, on the Little North Branch, at the falls around which now stand Waterman's starch factory and Wainwright's Iron foundry. Clarissa, daughter of Col. Davis, and now wife of Hon. Geo. Worthington, was the first child born in town. The settlement of the town went on rapidly, and in 1791 the population numbered 117 persons. On the 20th of March, this year, the town was organized, and Ziba Woodworth, a revolutionary soldier, who was desperately wounded at Fort Griswold, was chosen town clerk. Col. Davis was this year, also, chosen to represent the town in the legislature. The first settlers were mostly hardy, enterprising and intelligent young men, among whom were Jonathan Snow, James Taggard, John Templeton, Sol'n Dodge, James Hawkins, David Wing, Jr., (afterwards Sec'y of State,) Ziba Woodworth, Nath. Davis, Nath. Peck, Caleb Bennett, Clark Stevens (*Friends*), B. I. and J. B. Wheeler. In less than 7 years from the beginning of improvements, a company of militia of 72 men was organized, and Parly Davis chosen first captain. A circulating library of about 200 volumes of well selected books was also established near the same time, in which most of the inhabitants became proprietors. And to this fact may doubtless be attributed, in a good degree, the more than ordinary intelligence and taste for reading which, we believe, has distinguished, till the present time, the inhabitants, especially the farm-

MONTPELIER.

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ing class of this town. This town was constituted the permanent seat of government of the state by an act passed Nov. 8, 1805, and became the shire town of the county of Jefferson (afterwards changed to Washington,). When the seat of government was established here, a large wooden building was erected for a state house, within five rods of the spot, it may be interesting to relate, where the long sighted Col. Davis, more than a dozen years before, had predicted the public buildings of the State would eventually be located, and within 15 rods of the site on which the present splendid granite State House now stands. The religious denominations in this town are 2 societies of Congregationalists, and 1 each of Methodists, Universalists and Friends, or Quakers. The Congregational churches are in the village of Montpelier, the 1st, or old church, numbering nearly 300 members, the new, or 2d church, a little less. Rev. C. Wright was the first settled Congregational minister, who died in the spring of 1840, having been nearly ten years before succeeded by the Rev. Mr. Hopkins, and afterwards Rev. Buel W. Smith, the last settled minister. Rev. S. Kellogg is the pastor of the 2d church. The Rev. Mr. Harding is the located preacher of the Methodist church, and the Rev. Mr. Ballou of the Universalists. There is also a Freewill Baptist society in town, though small. The Methodists are numerous, having two meeting-houses, one in the village, and one mostly occupied by them in the centre of the town. The Friends have also a meeting house in the easterly part of the town. The township is watered by the Winooski river, which runs through the southeast corner, and along the southern boundary, by the Little North Branch, which crosses the southwest corner, by Kingsbury Branch, which crosses the northeast corner, and by several smaller streams. The mill privileges are both good and numerous. The surface of the town is uneven, but the soil, for a general thing, is uncommonly fine, and there is scarcely an acre of waste land in town,—the most of it richly, and all of it fairly rewarding the labors of the industrious farmer. The prevailing character of the rocks is slate and lime, sometimes distinct, but more generally combined. Rare minerals have not been found here, unless the sulphurets of iron, copper, and talc, which are common in the slate rocks, be reckoned.—About 10 years ago there was a company formed and a charter obtained, for boring for salt, and, by the aid of machinery, a hole perforated to the depth of 800 feet,

through a solid rock, below the falls on Winooski river, but no salt water obtained. From the sediment drawn up, it appeared that the rock, the slate-lime stone, preserved its character, with an occasional layer of flint or sand stone, through the whole of that depth; and one or two springs, impregnated with iron, which were come across in the course of the drilling, were the only discoveries made, till the project was relinquished. *Montpelier village*, incorporated in 1818, embracing a square mile, and, lying in the southwest corner of the township, on the bank of Winooski river, and on both sides of the Little North Branch, contains, by the census of 1840, 1,720 inhabitants. It is about 10 miles northeasterly from the geographical centre of the state, and, besides being the point of intersection of the roads from all parts, is the great thoroughfare from Boston to Canada, the travel going through in not only in this, but in all directions. The situation is low, but the streets and building ground have been raised so much that it is now as dry as other places of the like soil. With some also it is rendered somewhat unpleasant by the promixity of the hills. The whole site of this village bears unequivocal evidence of having been the bed of a lake about 40 feet deep, the original surface of the water being indicated by the strata of earth and rocks on all the surrounding hills, and the whole having been drained, probably, by the deepening of the channel at Middlesex narrows. The place, however, has had a rapid growth, and is now one of the most flourishing interior villages in New England. Its public buildings are, the beautiful and durable State House,* built under the superintendence of A. B. Young, architect, in 1836-7, which is superior, perhaps, to any State House in the Union, unless we except the recent one in North Carolina,—a court house, jail, a brick academy, built on the site of the wood one destroyed by fire in 1822, a spacious brick meeting house and two handsome wood ones. The academy, or county grammar school, was incorporated Nov. 7, 1800, and is now a flourishing institution, with a library, philosophical apparatus, &c., under the care of Calvin Pease, A. M., the number of pupils having been, in some quarters of the past year, about 100. There are in this village, at present, 12 practising attorneys at law, and 5 physicians. There are 3 printing offices, at which weekly newspapers are published, viz. that of the Universalist Watchman, Vermont Watchman, and Vermont Patriot,—one iron foundry, two

* For a description see part second, p. 130.

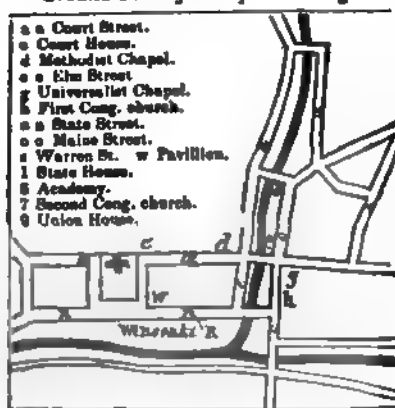
MOOSE RIVER.

MORRIS.

MORGAN.

clothing or fulling mills, one starch factory, and 3 druggist's stores. There are 12 India and English goods stores, and the amount of the sales of imported goods annually sold by them is unusually great for a village of its size, amounting on an average, as one of the most intelligent of its merchants has been at the pains of ascertaining, to the sum of \$200,000, at a safe estimate, not including the sales of the 3 stove and hollow-ware stores in this place. Montpelier village, indeed, is emphatically a business place, and the inhabitants, who began without capital, and had to be the artificers of their own fortunes, are strongly characterized as a community by their habits of industry and economy, and their discountenance of all lounging and idleness. There is 1 book bindery, a manufactory of piano fortes and other musical instruments, together with a large proportion of mechanics' shops of nearly every kind to be found in the country. A substantial arch bridge of about 100 ft. span crosses Winoski river at the falls, and unites the village to a cluster of buildings on the Berlin side, among which are a saw mill, a large, valuable grist mill, and a machine shop.

Ground Plan of Montpelier village.



There are 3 other small villages in the town of Montpelier,—one at the centre, consisting of a tavern, a meeting house, several mechanics' shops, and about a dozen dwelling houses; one somewhat larger on Winoski river, in the east part of the town, called Dagget's mills, containing a meeting house, tavern, clothing works, saw and grist mill; and one nearly the same size in the north part of the town, called Rich's Hollow, on the Calais branch of Winoski river, where there are a store, a woollen factory, and common mills. The number of school dis-

tricts in the whole town is 16, with the same number of school houses, which are generally good. The latitude of the State House is 44° 16' north, and its longitude 71° 33' west from Greenwich. *Statistics of 1840.*—Horses, 652; cattle, 2,453; sheep, 7,443; swine, 1,366; wheat, bush, 3,652; barley, 463; oats, 32,590; rye, 596; buckwheat, 1,568; Ind. corn, 7,630; potatoes, 66,860; hay, tons, 7,205; sugar, lbs. 67,070; wool, 12,941. Pop. 3,725. D. R. R.

Moose River, is an eastern branch of the Passumpsic, and rises in Granby and East Haven. Taking a southwesterly course through Victory, Bradleyvale, Concord, and a part of St. Johnsbury, it falls into the Passumpsic opposite to St. Johnsbury Plain. It is generally a rapid stream, except through Bradleyvale and a part of Concord, where it is sluggish through flat land. Length 24 miles.

MORRIS, a post town in the central part of Washington county, is in lat. 44° 15' and long 4° 19', and is bounded northerly by Middlesex and a part of Waterbury, from which it is separated by Winoski river, easterly by Berlin, southerly by Waitsfield, and westerly by Duxbury. It was chartered June 7, 1763, containing 23,040 acres, and lies eight miles southwest from Montpelier, and 30 southeast from Burlington. The settlement of this township was commenced about the year 1750, and the town was organized 3 or 4 years after. The religious denominations are Congregationalists and Methodists, and there is a small society of each. Much of the township is mountainous, and incapable of being settled. Mad river enters it from Waitsfield about a mile from the southwest corner, and passes through it in a northeasterly direction into Winoski river. On this stream are several mill privileges. There are in town 2 fulling mills, 3 grist and 6 saw mills, 1 store, and 1 tavern. *Statistics of 1840.*—Horses, 225; cattle, 1,408; sheep, 3,546; swine, 869; wheat, bush, 1,735; barley, 151; oats, 9,110; rye, 222; buckwheat, 810; Ind. corn, 4,105; potatoes, 38,848; hay, tons, 3,171; sugar, lbs. 28,791; wool, 6,570. Population, 1,128.

MORGAN, a township in the eastern part of Orleans county, is in lat. 44° 51' and long 4° 58', and is bounded north by Holland and a part of Derby, easterly by Wenlock and Warner's gore, and southwest by Navy and a part of Salem. It lies 52 miles northeast from Montpelier, and was chartered Nov. 6, 1780, to Jedediah Calderkin and others, by the name of Caldersburgh. The name was altered to Morgan Oct. 19, 1801. The settlement of this township was commenced about

MORRISTOWN.

MORRISTOWN.

the year 1800, by Nathan Wilcox. The town was organized in March, 1807, and Christopher Bartlett was first town clerk, and Rufus Stewart first representative. A Congregational church was organized here June 4, 1823, and at first consisted of 7 members. Their present number is 73, and their present pastor, the Rev. J. S. Clark, was ordained Jan. 11, 1827. A Methodist class was formed here in 1829. The surface of the town consists of swells and vallies, and is mostly susceptible of cultivation. Timber generally hard wood. Soil good. A head branch of Clyde river, called Farrand's river, passes through the east part of Morgan, and Seymour's lake, which is about four miles long and nearly 2 wide, lies in the central part. It discharges its waters to the south through Echo Pond into Clyde river. *Statistics of 1840.*—Horses, 86; cattle, 492; sheep, 842; swine, 187; wheat, bus. 1,617; barley, 233; oats, 3,674; rye, 10; buckwheat, 669; Ind. corn, 303; potatoes, 17,675; hay, tons, 1,037; sugar, lbs. 16,102; wool, 1,889. Population, 422.

MORRISTOWN, is situated in the central part of Lamoille county, in lat. 44° 32' and long. 4° 20', and is bounded northerly by Hydepark, easterly by Elmore, southerly by Stow, and westerly by Sterling. It lies 20 miles northwest from Montpelier, and 29 northeast from Burlington. It was granted Nov. 6, 1780, and chartered to Moses Morse and associates, Aug. 24, 1781, containing 23,040 acres. The settlement was commenced in the spring of 1790, by Mr. Jacob Walker, who came from Bennington, accompanied by his brother, who shortly after returned. Mr. Walker remained here during the summer, making his home at the house of Mr. John McDaniel, in Hydepark, to which place he returned on Saturday night, going out again on Monday with provisions sufficient to last him through the week. In this way he labored through the summer, and in the fall he returned to Bennington. In the spring of 1791 Mr. Walker brought his family here and continued through the summer, and in the fall again returned to B. In the spring of 1792, Mr. Walker and family came to this town, accompanied by Mr. Olds and his family. They built a camp, in which Mr. W. and wife, and Mr. Olds and wife, and two hired men, lived two months, during which time Gov. Butler, of Waterbury, paid them a visit. At the end of two months a house had been erected, into which they all removed. In the fall Mr. Walker moved to Fairfax, and left Mr. Olds and family here alone. Mrs. Olds was the

first woman that wintered in this town. Their nearest neighbors, on the south, were at Waterbury, 14 miles distant, and no road. The nearest mill was at Cambridge, distant 20 miles. In the summer of 1793 Capt. Safford, from Windsor, Ma., built the first saw mill, at the Great falls on the Lamoille. The town was organized in 1796, and Comfort Olds was first town clerk. The first sermon preached in this town was by Rev. Mr. Bogue, a missionary, in the summer of 1798, and the second by the *eccentric* Lorenzo Dow. The surface of this town is moderately uneven. The soil is of a good quality, and easily cultivated. Morristown is, in point of agricultural products, the second in the county. The timber is maple, beech, birch, hemlock, &c. The Lamoille river enters this town near the northeast corner, passing by Morrisville and Cadysville, and after running four miles in the north part of this town, again returns into Hydepark. Along this river in Morristown are some fine tracts of intervalle, and on it are two excellent mill seats. There are several other streams in town, on which mills are erected. Morrisville is a pleasant, flourishing village, situated near the great falls. Here is one of the finest situations for manufacturing establishments which the state affords. At the falls a few rods west of the village, may be found curious specimens of the wonder working power of water in wearing holes into the solid rock, some of which are nearly 8 feet deep and 4 feet broad. The river at this place pours itself into a channel cut directly across the stream, 20 feet deep and 30 broad. This channel the early settlers denominated the *pulpit*, from the resemblance of the rocks at the north end to that structure. On the west side of this chasm the rocks rise perpendicularly to the height of 30 feet, and the beholder, while standing on the edge of this precipice, sees the whole body of the river plunged down at his feet into this boiling cauldron, from which it escapes through a channel at the south end, and immediately spreading itself out encircles numerous islands, whose high, jagged points are covered with a thick growth of cedar and fir, and altogether presenting a scene of grandeur and beauty seldom found surpassed. Cadysville is situated two miles below Morrisville, and bids fair to become a place of considerable business. At the centre of the town is a small village, pleasantly located and wanting only the facilities of water power to make it the principal place of business. In the southeast corner of the town is a pond called *Joe's Pond*, from an

MOUNT HOLLY.

MOUNT INDEPENDENCE.—MOUNT NERO.

MOUNT TABOR.

old Indian pensioner who lived by the side of it. (*See Hydepark.*) In the east part of this town lead ore has lately been discovered. The public buildings are a town house and four meeting houses, the first of which was erected in 1823. The Congregationalists and Methodists have each convenient and commodious houses. The Universalists, in common with several other denominations, erected an elegant house at Morrisville, which was dedicated Aug. 25, 1840. There are 4 physicians, 2 attorneys, 10 saw mills, 2 grist mills, 2 tanneries, 2 carding machines, 1 woollen factory, 4 stores, and 2 taverns. *Statistics of 1840.*—Horses, 385; cattle, 2,807; sheep, 7,578; swine, 1,376; wheat, bush. 3,454; barley, 52; oats, 12,916; rye, 233; buckwheat, 38; Ind. corn, 5,614; potatoes, 66,720; hay, tons, 5,095; sugar, lbs. 50,980; wool, 14,109. Pop. 1,502.

MOUNT HOLLY, a post town in the east part of Rutland county, is in lat. 43° 29' and long. 4° 14', and is bounded north by Plymouth and Shrewsbury, east by Ludlow, south by Weston, and west by Wallingford and a part of Mount-Tabor. It lies 60 miles south from Montpelier, and 20 west from Windsor. It is made up of Jackson's gore, containing 10,669 acres, 3,388 acres from the east side of Wallingford, and 11,739 acres from the west side of Ludlow, being, in the whole, 25,796 acres, and was incorporated, Oct. 31, 1792. The settlement of this township was commenced, in 1781, by Ichabod G., Stephen, and John Clark, Jonah, Amos and Ebenezer Ives, from Connecticut, Jacob Wilcox, from Rhode-Island, and Joseph Green, David Bent, Abraham Crowly and Nathaniel Pingrey, from Massachusetts. The town was organized, in 1792. Stephen Clark was first town clerk, and Abraham Jackson, first representative. The religious denominations are Baptists, Methodists, Congregationalists and Friends, or Quakers. The Baptist church is most numerous, and Elder D. Parker was settled over it, in 1811. They have a meeting-house in the north part of the town. The Congregational church was organized in 1799, but that and the other societies are small. The Friends have a small house for public worship; and there is a meeting house in the south part, owned by the different denominations in common. In 1813 there were 37 deaths in this town, mostly occasioned by the epidemic of that year. Mill river, which rises in the south part of the township, and runs through the northeast corner of Wallingford and the southwest corner of Shrewsbury, and unites with Otter creek, in Clarendon, is the only

stream of consequence. In the northeastern part is a considerable pond called *Palches* pond. In soil and timber it is similar to the mountain towns generally, being much better adapted to the production of grass than grain. About four miles south from Sprague's tavern, on the summit of the Green Mountains, is found amianthus, common and ligniform asbestos and fossil leather. Its color is a grayish white, and it is very abundant. Ludlow mountain is a considerable elevation, lying along the line between this township and Ludlow. The turnpike from Rutland to Boston passes through this township. There are here 2 stores, 1 grist, 8 saw and 2 fulling mills, 1 carding machine and 1 tannery. *Statistics of 1840.* Horses, 313; cattle, 2,802; sheep, 3,425; swine, 725; wheat, bus. 1,832; barley, 448; oats, 10,340; rye, 296; buckwheat, 680; Indian corn, 836; potatoes, 65,930; hay, tons, 5,317; sugar, lbs. 44,120; wool, 8,342. Population, 1,356.

MOUNT INDEPENDENCE lies in the northwest corner of the township of Orwell, and about two miles southeast of Ticonderoga Fort. It is an inconsiderable mountain, and worthy of notice only on account of the fortifications formerly erected upon it, and its connection with the early history of our country.

MOUNT NERO, an eminence in Middlebury, resting on a base of about two miles by one, and rising gradually 439 feet above the level of Otter creek. Upon its southern declivity the northeast part of the village rests. It affords some of the best arable land in the township, and is cultivated to its summit, where it exhibits to view Lake Champlain. It is a place of much resort to those who love to take an extended view of natural scenery; see "*Alps on Alps arise*"; and gaze at the mountains, which stretch off to a great distance north and south, both in New York and Vermont. This eminence is sometimes called *Chipman's Hill*.

MOUNT TABOR, a township in the southeast corner of Rutland county, is in lat. 43° 21' and long. 4° 8', and is bounded north by Wallingford, east by Weston and a part of Mount Holly, south by Peru, and west by Danby. It lies 26 miles southwest from Windsor, and 36 northeast from Bennington, and was chartered August 28, 1761, by the name of Harwich. It was organized March 13, 1788, and John Jenkins was first town clerk. This is a mountainous township, and much of it incapable of ever being settled. The mountains belong to the range of Green Mountains, and the air and soil are not so well adapted to the production of grain as

NEAL'S BROOK.

NEWARK.

NEWBURY.

grass. Otter creek rises here, and runs south into Peru, then west into Dorset, and then north through the western border of this township into Wallingford. *Statistics of 1840.*—Horses, 42; cattle, 341; sheep, 883; swine, 109; wheat, bus. 329; barley, 20; oats, 634; rye, 33; buckwheat, 211; Indian corn, 390; potatoes, 6,000; hay, tons, 550; sugar, lbs. 3,585; wool, 1,760. Population, 226.

MOUNT TOM, a considerable eminence in Woodstock.

MUDDY BROOK divides Williston from Burlington, and falls into Winooski river.

NAVY. Name altered to Charleston, Nov. 16, 1825. *See Charleston.*

NEAL'S BROOK rises near the north corner of Lunenburg, in several branches, and, running south, falls into a pond of the same name, which is about a mile long and half a mile wide, and lies near the centre of Lunenburg. It then continues its course south, meets a westerly branch, and, after running about half a mile further, falls into Connecticut river, by a mouth nearly two rods wide. On this stream are several mills and other machinery.

NESHOB. Name altered to Brandon, Oct. 20, 1784. *See Brandon.*

NEWARK, a post town in the northeastern part of Caledonia county, is in lat. 44° 42' and long. 5° 8', and is bounded northeasterly by Brighton, southeasterly by East Haven, southwesterly by Burke and Sutton, and northwesterly by Westmore. It lies 44 miles northeast from Montpelier; was granted November 6, 1780, and chartered August 15, 1781, to Wm. Wall and others, containing 23,040 acres. The settlement of this township was commenced about the year 1800. It is watered by a great number of small streams, which are here collected together, and form the Passumpsic river. But a small part of this township is settled, although the settlement has been extending gradually from its commencement. It contains 2 saw mills and 4 school districts. *Statistics of 1840.*—Horses, 77; cattle, 417; sheep, 951; swine, 371; wheat, bus. 1,756; barley, 729; oats, 2,687; rye, 111; buckwheat, 459; Indian corn, 315; potatoes, 18,260; hay, tons, 801; sugar, lbs. 21,813; wool, 1,679. Population, 360.

NEWBURY, a post town in the northeast corner of Orange county, is in lat. 44° 6' and long. 4° 52', and is bounded north by Ryegate, east by Connecticut river, which separates it from Haverhill, N. H., south by Bradford, and west by Topsham. It lies 27 miles easterly from Montpelier, and 47 northeasterly from Windsor; and was chartered to Gen. Jacob Bayley and

others, March 18, 1763, containing 36,450 acres. The settlement of this township was commenced in the spring of 1762. The first family was that of Sam'l Sleeper. The next were the families of Thomas and Richard Chamberlain. John Haxleton also moved his family to Newbury in 1762, and his daughter Betsey, born in 1763, was the first child born in town. Jacob Bailey Chamberlain, son of Thomas C., born the same year, was the male child. The parents of the latter received a bounty of 100 acres of land, agreeably to a promise of the proprietors of the township. Among the first settlers, in addition to the above, may be mentioned Gen. Jacob Bayley, Col. Jacob Kent, Col. Thomas Johnson, John Taplin, Noah and Ebenezer White, Frye Bayley, and James Abbott. The early inhabitants were mostly emigrants from the southeastern parts of New Hampshire, and from Newbury, Mass. They had peculiar hardships to endure, there being no inhabitants on Connecticut river, at this time, north of No. 4, now Charlestown, N. H., or between this place and Concord. Nor were there any roads through the wilderness, or any thing, but marked trees, to facilitate the communication between this and the civilized settlements. The nearest mill was at Charlestown, distant more than 60 miles. To that they went for their grinding, carrying their grain down the river in canoes during the summer, and drawing it upon the ice in the winter. The crank, for the first saw mill built in Newbury, was drawn from Concord, N. H., distant nearly 80 miles, upon a hand-sled. Gen. Bayley was very active in forwarding the settlement of this part of the country, and distinguished himself as a general officer in the revolutionary war. He, in 1776, commenced making the road from Newbury to St. John's, which was opened by Gen. Hazen, in 1779, as far as Hazen's Notch, in Westfield. Newbury was garrisoned by one or more companies of soldiers during the revolution, and was, for many years after, the most important town in this part of the state. The first meeting of the proprietors of this township was held at Plastow, N. H., June 13, 1763. The town was organized immediately after the settlement was commenced, and Col. Jacob Kent was chosen town clerk, which office he held till 1798. The Congregational church of this town was formed at Hollis, Mass., in September, 1764. The Rev. Peter Powers, the first minister of Newbury, was installed over this church Feb. 27, 1765, and he preached his own installation sermon. He was dismissed in 1784, and died at

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Deer-Ise, Me., in 1799. His successors at Newbury have been Rev. Jacob Wood, settled Jan. 9, 1788; Rev. Nath'l Lambert, Nov. 17, 1790; Rev. Luther Jewett, Feb. 28, 1821; Rev. Clark Perry, June 4, 1828, and Rev. George W. Campbell, the present minister, July 27, 1836. The Methodist Episcopal society was formed in 1827, but did not enjoy constant ministerial labors until 1834. Since that time the following ministers have been stationed here: Rev. S. Kelly, 1834-5; Rev. E. J. Scott, 1836; Rev. J. G. Dow, 1837-8. Rev. W. M. Mann, 1839; Rev. J. Templeton, 1840; Rev. L. D. Burrows, 1841. Communicants about 200. Connecticut river waters the eastern border of this township, and along this stream are here some of the most beautiful tracts of intervale in Vermont. The meadows are designated as follows: Upper meadow, in the north part, Cow meadow, Oxbow meadow, in the bend of Connecticut river, called the Great Oxbow, containing 450 acres, the Musquash meadow, south of the mouth of Harriman's brook, containing 300 acres, Kent's meadow of about 200 acres, Sleeper's meadow of 160, and Hall's meadow of 250 acres. The other streams, of most consequence, are Wells river, which crosses the northeast corner, affording some excellent stands for mills, Harriman's brook, which rises in a pond of the same name, passes through Newbury village, and joins Connecticut river, a little south of the Great Oxbow, and Hall's brook, which originates in Hall's pond, and runs through the south part, and falls into the Connecticut in Bradford. These are all considerable mill streams. By the side of Harriman's brook, about 50 rods north of the meeting house, is a mineral spring, which is a place of considerable resort for invalids. The water is strongly impregnated with sulphureted hydrogen gas, and is said to resemble the celebrated Harrow Gate waters of Yorkshire, England, and likewise those of Ballcastle and Castlemain, Ireland. They are found to be a specific for scrofulous and all kinds of cutaneous eruptions and complaints. A good shower house and baths are constructed near the spring, and every accommodation is provided at the hotel, which the visitant can desire. Springs of the same kind are met with in several other places in the township. There are two very pleasant villages in Newbury. *Newbury village* is situated near the Great Oxbow, containing 2 meeting houses, and the buildings of the Newbury seminary, together with a large hotel, stores and mechanic's shops. *Newbury Seminary* commenced its oper-

ations in the fall of 1834, under the direction of Rev. C. Adams and Rev. Osmon C. Baker. The seminary building is a large, substantial, brick edifice, three stories high, and conveniently arranged for study and recitation rooms. Connected with this is a large boarding house, sufficiently extensive to accommodate about 100 students. In the immediate vicinity of the Institution, such facilities are afforded, that between 200 and 300 students may be accommodated. Newbury Seminary is under the immediate patronage of the New Hampshire Annual Conference of the Methodist Episcopal Church, but its privileges are equally extended to all denominations. The Institution is furnished with good apparatus for illustrating the various branches of natural science, and also, with a very respectable library and cabinet of minerals. The following statistics, giving the number of students for the year ending July, 1841, will show its present condition.

	Fall.	Winter.	Spring.	Summer.
Gentlemen,	140	51	109	62
Ladies,	96	32	111	46

Whole No. 236 83 220 108

Aggregate of all the Terms, 647.

The board of instruction for the past year has consisted of Rev. Osmon C. Baker, A. M. *Principal, and Teacher of Belles Lettres and Natural Science*; Rev. Clark T. Hinman, A. B., *Teacher of Greek and Mathematics*; Charles P. Merriman, *Teacher of French, Italian, and Spanish Languages*; J. Harrison Goodale, A. B. *Teacher of Latin and English Literature*; Miss Rachel Smith, *Preceptress, and Teacher of Ornamental Branches*; Miss E. E. Cheney, *Teacher on the Piano Forte*.

The other village is situated at the mouth of Wells river, and is called *Wells river village*. It is well situated for trade, and has valuable water privileges on Wells river, on which is a paper mill and a variety of other mills and machinery. It contains 3 stores, a tavern, a considerable number of mechanics and a post office, called Wells river post office. Just below this village is a new bridge across the Connecticut, and there is another just below Newbury village, leading to "Haverhill corner." The Legislature has held two sessions in Newbury; the first in 1787, and the other in 1801. There are in Newbury 4 meeting houses, 9 stores, 3 taverns, 1 paper mill, 4 carding machines, 4 fulling, 9 saw and 3 grist mills, and 1 shingle mill. *Statistics of 1840.*—Horses, 644; cattle, 2,528; sheep, 10,976; swine, 2,015; wheat, bus. 6,358; barley, 397; oats, 43,587; rye, 679;

NEWFANE.

NEWFANE.

buck-wheat, 1,099; Indian corn, 11,297; potatoes, 91,689; hay, tons, 5,616; sugar, lbs. 32,755; wool, 20,758. Population, 2,579.

NEWFANE, a post town, and the seat of justice in Windham county, is situated 10 miles west of Connecticut river, in lat. 42° 58' and long. 4° 12' and is bounded north by Townshend, east by Dummerston, Putney and Brookline, west by Wardsborough and Dover, and south by Marlborough. It contained, by charter, six miles square, but has been reduced by contributing to Brookline a small part of said township, which lies on the east side of West river. It is, as the roads are traveled, 110 miles from Boston, 80 from Albany, 110 from Montpelier, and 50 from Windsor. In 1753, a charter of this township was granted by Benning Wentworth, then governor of the province of New-Hampshire, to Abraham Sawyer and others, by the name of Fane. In 1761, the former charter was returned to governor Wentworth, and a new one granted to Luke Brown and his associates. On the 11th of May, 1772, the governor of New-York made a grant of said township by the name of "Newfane," to Walter Franklin and twenty other persons, principally residing in the city of New-York. On the 12th of May, 1772, the said W. Franklin and his associates conveyed their right, in said township, to Luke Knowlton and John Taylor, Esqrs., of Worcester county, Mass. The titles of all the lands, in said town, are derived from the New-York charter. In 1772, a survey was made of the whole township, and on the 17th of May, 1774, said town was duly organized, but was not represented in the General Assembly of this state, till 1780. Col. Wm. Ward was the first representative. Luke Knowlton, Esq., was chosen first town clerk, which office he held till 1790. In 1792, Nathan Stone, Esq., was chosen town clerk, which office he continued to hold till about 1835. The settlement of the town was commenced in the month of May, 1766, by Dea. Jonathan Park, Nathaniel Stedman and Ebenezer Dyer, who emigrated from Worcester county, Mass. For several years, they suffered all the hardships and privations incident to the settlement of a new country. Without roads, horses, or oxen, they were under the necessity of conveying, by their own strength, all their provisions, &c. from Hinsdale, a distance of 20 miles, through a pathless wilderness. The first child born in town, was Lucy, a daughter of Dea. J. Park, August 15, 1769. The people of this town have been highly favored with religious privileges.

During half a century they were destitute of a settled minister but only eighteen months; and they were supplied with preaching, one year, within that time. The Rev. Hezekiah Taylor graduated at Harvard College, in 1772, and having prepared himself for the ministry, came to this town, in 1774. There were but six families then in the town, but a Congregational church was formed, consisting of nine members, and in August, the same year, Mr. Taylor was ordained, and took charge of his little flock. He continued to preach till May, 1811, and died, August 23, 1814, aged 66 years. The Rev. Jonathan Nye was installed, colleague with Mr. Taylor, in November, 1811, and was dismissed in January, 1820. The Rev. Chandler Bates was ordained July 4, 1821, and dismissed in 1830; the Rev. John F. Griswold, April 10, 1834, and dismissed July 31, 1839; and the Rev. L. S. Coburn, the present minister, October 2, 1839. The other denominations are Methodists, Baptists and Universalists. Among the early inhabitants, the Hon. Luke Knowlton distinguished himself by his talents and enterprise. He emigrated from Shrewsbury, Mass. and came into Newfane, in 1772. He was promoted to several important civil offices; was once a judge of the supreme court, and many years, councillor and chief judge of the county court. He died, December 12, 1810, aged 73 years. Calvin Knowlton, Esq. son of the Hon. L. Knowlton, graduated at Dartmouth College, in 1788, and was educated to the law. He sustained several civil offices, was a distinguished lawyer and a worthy man. He died, January 20, 1800, aged 39. The Hon. Ebenezer Allen was an early settler, and, for many years successively, represented the town in the general assembly. He was a judge of the county court, and judge of probate, and much in public business till his death, December 16, 1805, aged 46. The Rev. Mr. Taylor contributed, eminently, to the happiness and prosperity of the early inhabitants of the town. Being possessed of a firm and vigorous constitution, and a resolution of mind, unshaken by hardships and misfortunes, with a liberal education, with the most industrious habits, and a disposition of kindness and benevolence towards all those, with whom he was in any wise connected, while he faithfully ministered to the spiritual and temporal wants of his people, he was the delight of the social circle, and an ornament to general society. We have no account that the early settlers of Newfane were ever molested by the Indians. But tra-

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dition informs us that, in the war of 1756, and some years before any settlements were commenced, a battle was fought in this town. *See part second, page 68.* This town is watered by West river, 'South branch,' Smith's brook, Baker's brook, besides numerous rivulets. West river has its origin in Weston, and, after passing through the towns of Londonderry, Jamaica, Townshend, and the easterly part of Newfane and Dummerston, unites with the Connecticut at Brattleboro'. The South branch originates in Dover, and, after receiving a number of tributary streams, passes through the southerly part of Newfane, from west to east, and falls into West river, on the east line of said town. This stream affords many valuable mill seats and water privileges. Smith's brook affords some eligible mill seats. This town is diversified with high hills and deep vallies; but there are no elevations that deserve the name of mountains. There are no ponds, and very little broken or waste land that is unfit for cultivation. The old growth of timber is principally rock maple, beech, birch, spruce and hemlock; but the recent growth, in some places, affords walnut and oak in abundance. The intervalles afford excellent tillage, and the uplands are, perhaps, inferior to none for grazing. The principal products for market are beef, pork, butter and cheese. The geological character of this town is primitive, and the rocks, *in situ*, are principally mica slate and hornblende. Some small beds and veins of granite, *sienitic granite*, and gneiss are found, but none that can be advantageously wrought into building stone. In the southwest part of the town is an extensive bed of serpentine and steatite, which, probably, at some future period, may be profitably wrought. No very valuable minerals have yet been discovered. Some rich specimens of iron ore have been found, but not of sufficient quantity to defray the expense of refining. Green carbonate and pyritous copper, in small quantities, and the red oxide of titanium have also been found. Ferruginous sand is abundant. The following list comprises the principal part of the minerals, which have hitherto been discovered. Silicious carbonate of lime, crystalized calc. spar, sulphate of alumine, and potash (alum), efflorescing on mica slate, sulphate of iron, garnet, common, milky, greasy, smoky, limpid, granular, red ferruginous, yellow ferruginous, radiated, and tabular quartz, red jasper, yellow and red feldspar, crystalized epidote, zoisite, tremolite, scapolite, compact abestus, sah-lite, augite, schorl, fasciculite, actynolite,

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diallage, bitter spar, precious serpentine, white and green talc, indurated talc, chlorite, chlorite slate and sappare.* There are three small villages, the centre, the south village and Fayetteville. The *centre* is on elevated ground, and formerly was the site of the county buildings, which are now at Fayetteville. From the meeting-house here may be seen some part of at least fifty towns, lying in Vermont, New Hampshire and Massachusetts. On the east is a view of the highlands in New Hampshire and Massachusetts, to the distance of 60 or 70 miles, whilst on the margin of the horizon, the 'cloud-capt' Wachusett and Monadnock appear to 'mingle with the heavens.' On the north, south and west, little is to be discovered, but an extensive 'sea of mountains,' which displays, in wild disorder, ridge above ridge, and peak above peak, till the distant view is lost among the clouds.—The *South village* is situated on the south branch, and has the advantage of good water power. *Fayetteville* is pleasantly located in the easterly part of the town, not far from West river. It contains the county buildings, two or three taverns, stores, &c. In 1801, a county grammar school was incorporated at Newfane.—There are in town 3 grist, and 12 saw mills, 1 oil, and 1 clothing mill, 2 tanneries and 6 stores. *Statistics of 1840.*—Horses, 259; cattle, 2,686; sheep, 4,486; swine, 761; wheat, bush. 973; barley, 168; oats, 6,686; rye, 2,113; buckwheat, 328; Ind. corn, 6,472; potatoes, 37,564; hay, tons, 3,584; sugar, lbs. 14,405; wool, 9,663. Population, 1,043.

NEW FLAMSTEAD. *See Chester.*

NEW HAVEN, a post town in the central part of Addison county, is in lat. 44° 6' and long. 3° 53', and is bounded north by Bristol and Ferrisburgh, east by Bristol, south by Middlebury and Weybridge, and west by Addison and Waltham. It lies 26 miles south from Burlington and 31 nearly west from Montpelier; was chartered Nov. 2, 1761, and contains 23,390 acres. The settlement of this township was commenced in 1769, by a few emigrants from Salisbury, Conn., on that part which is now set off to Waltham. The settlement was, however, broken up and abandoned in '76, in consequence of the revolutionary war. Near this settlement, and on that part of the township, now constituting a part of the city of Vergennes, a fort was erected and garrisoned by troops, commanded by Capt. Ebene-

* In 1826 a lump of native gold was picked up in this town, weighing 8 1-2 ounces. It was pure gold with the exception of some small quartz crystals attached to it, weighing perhaps half an ounce. Its specific gravity was 16.5.
M. FIELD.

NEW HAVEN.

NEWPORT.—NORFOLK.

NORTHFIELD.

zer Allen, and others, to protect the frontier settlements from the common enemy the "Yorkers." At the close of the war the settlers returned, and in '85 the town was organized, and Luther Evarts was first town clerk. Two Baptist churches were formed, one in the south and the other in the west part of the town, about the year 1804, both of which have been dissolved, and no records are to be found. The Congregational church was formed here November 15, 1797, over which the Rev. Silas L. Bingham was installed Jan. 1, 1805, and dismissed June 8, 1808; the Rev. Josiah Hopkins was settled June 14, 1809; and dismissed Aug. 20, 1830; Rev. Joel Fisk, Oct. 26, 1830, and dismissed September 25, 1832; Rev. Enoch Mead, January 9, 1834, and dismissed November, 16, 1836, and Rev. James Meacham, the present minister, was settled May 29, 1838. This is at present the principal church in town. They have a meeting-house, erected in 1820. The streams are Otter creek, Little Otter creek, and New Haven river. The latter enters the township from the east, about 2 miles from the southeast corner, and after running five miles falls into Otter creek, about a mile from the southwest corner. Of the calamity occasioned by a freshet upon this river in 1830, we have already given some account in part first, page 20. Otter creek was, by the charter, the western boundary, but tracts have been set off from New Haven along the creek, to Vergennes, Waltham and Weybridge. The mill privileges are good, and there are several which are not yet occupied.—There are no ponds nor mountains. The soil in the western part is principally clay, or marl, and loam in the eastern part. Along New Haven river are alluvial flats, which are extensive and very productive. Quarries of excellent marble are found in almost every part. The timber consists of maple, beech, birch, elm, basswood, walnut, pine, oak, hemlock, &c. There are five roads running north and south through the township, viz., one on the west called Otter creek road, the next is Waltham turnpike, the next townhill road, the next Lanesborough street, leading by the meetinghouse, and named from the first settlers on it, who were from Lanesborough, Ms., and the next East street. There are in town 14 school districts, and as many school-houses, 2 grist, 2 saw, and 2 fulling mills, 3 stores, 1 woollen factory, and 2 tanneries. *Statistics of 1840.*—Horses, 411; cattle, 1,894; sheep, 17,638; swine, 1,389; wheat, bush. 1,964; oats, 13,196; rye, 964; buckwheat, 576; Indian corn,

10,368; potatoes, 59,482; hay, tons, 9,867; sugar, lbs. 9,468; wool, 59,388. Population, 1,503.

NEWPORT, a post town in the north part of Orleans county, is in lat. 44° 55' and long. 4° 40', and is bounded north by Pottou, Canada, east by Orleans and Memphremagog lake, which separates it from Derby, south by Coventry Gore, and west by Troy. It lies 48 miles north from Montpelier—was granted Oct. 26, 1781, and chartered by the name of Duncansboro, to Nathan Fisk, George Duncan and others, October 30, 1802, containing 23040 acres. The name was altered to Newport Oct. 30, 1816. The settlement of this township was begun before the year 1800. It however made but little progress till within a few years past. The timber is principally beech, maple, birch and hemlock. It is watered by a considerable branch of Missisco river and by several small streams which fall into Memphremagog lake. Black river also discharges its waters into the lake in this town. *Statistics of 1840.*—Horses, 169; cattle, 681; sheep, 1,467; swine, 408; wheat bus. 2,047; barley, 239; oats, 2,432; rye, 49; buck-wheat, 987; Indian corn, 1,034; potatoes, 21,080; hay, tons, 1,224; sugar, lbs. 33,920; wool, 2,527. Population, 591.

NEW-HUNTINGTON.—Name altered to Huntington, Oct. 27, 1795. See *Huntington*.

NORFOLK. This was a small township, situated in the northeastern corner of the state, granted February 26, 1782, containing 3340 acres. October 23, 1801, it was annexed to the township of Canaan.

NORTHFIELD, a post town in the southern part of Washington county, is in lat. 44° 8' and long. 4° 22', and is bounded northerly by Berlin, easterly by Williamstown, southerly by Roxbury, and westerly by Waitsfield. It lies 10 miles southwest from Montpelier, and 35 southeast from Burlington; was granted November 6, 1780, and chartered to Major Joel Matthews and others, August 10, 1781, containing 18,515 acres. November 7, 1822, a tract from the east part of Waitsfield was annexed to this township. The first land was cleared in this town by the Hon. Elijah Paine on the farm now owned by John Averill. The first settlement was made in May, 1785, by Amos and Ezekiel Robinson and Staunton Richardson from Westminster. The town was organized in 1794. Doct. Nathaniel Richardson was first town clerk, and Amos Robinson, Esq. was first representative. The religious denominations are Congregationalists, Methodists, Uni-

NORTHFIELD.

NORTH HERO.—NORTON.

NORWICH.

versalists, Freewill Baptists and Christians. There are 5 ordained ministers, viz. Rev Calvin Granger, Congregationalist; Elders Joel Winch, N. B. Ashcraft and A. T. Bullard, Methodists, and N. T. King, Freewill Baptist. The epidemic of 1811 and 12 was very mortal here, and the dysentery swept off about 30 children in this town in the fall of 1823. The principal stream in this town, is Dog river* which runs through it in a northerly direction, and affords a great number of valuable mill privileges. The timber is, hemlock, spruce, maple, beach and birch, intermingled with fir, pine, ash, butternut, &c. The soil is, generally good, and in many places, is easily cultivated. A range of argillaceous slate passes through the township from south to north. The surface is uneven, and a range of high lands passes from north to south through the town, both on the eastern and western side of the river. There are four small villages. The *Upper village*, so called, contains a store, 2 carding and clothier's shops, a trip hammer, 1 grist and 2 saw-mills, various mechanics and about 20 dwelling houses. The *Centre village* contains 2 meeting-houses, a store, tavern, mechanic shops and about 25 dwellings. *Factory village*, one mile north of the centre, is the principal place of business. The woollen factory here is 150 feet long, 42 wide, and contains 6 sets of woollen machinery, employing from 175 to 200 workmen and indirectly several hundreds more. About 80,000 lbs. of wool, \$25,000 worth of indigo, \$12,000 worth of wood, \$12,000 worth of loticem are used annually, and the labor costs about \$30,000. There are in this village 1 meeting house, 1 store, 1 tavern, a saw and grist mill, machine shop, &c. About 1½ mile north of Factory village is another small but thriving village called the "*Falls*." It contains 2 small flannel factories, a sawmill. &c. The water power here is good and safe. All of the above villages with the exception of the Centre which is a little off from that stream are situated on Dog river and have good water power. During the last 15 years this town has increased rapidly in wealth and population. There are in town, 18 school districts, 8 school-houses, 3 grist and two fulling mills, 1 carding machine, one woollen factory, 2 flannel factories, 3 stores, and 2 taverns. *Statistics of 1840.*—Horses, 329; cattle, 1,399; sheep, 4,979; swine 1,501; wheat, bus. 7,159; barley, 652; oats, 12,574; rye, 341; buck-wheat, 2,335; Indian corn,

4,362; potatoes, 57,367; hay, tons, 3,862; sugar, lbs. 24,515; wool, 15,057. Population, 2,013.

NORTH HERO, a post and shire town in Grand Isle county, is in lat. 44° 51' and long. 3° 44'. It is an island in lake Champlain, 26 miles north from Burlington, and 6 west from St. Albans. Area, 6,272 acres. It was granted in connexion with South Hero and Vineyard, and they were all chartered by the name of the two Heroes, Oct. 27, 1779, to Ethan Allen, Samuel Herrick and others. The settlement of this township was commenced in 1783, by Enos and Solomon Wood, the former from Bennington, in this state, and the latter from Norwich, Con. The British erected a block house here, at a place called Dutchman's Point, which was garrisoned, and not given up till 1796. The town was organized in 1789. Nathan Hutchins was the first town clerk, and also the first representative. The Freewill Baptists and Methodists are the most numerous denominations of Christians. The fever and ague was very common here for some time after the settlement was commenced, and in 1799 the bilious fever was very mortal. Since that time the town has been healthy. Nathan Hutchins died here some years ago, aged 90 years. The soil of the township is of an excellent quality, and produces grain of all kinds in abundance. It has no streams of any consequence, and no mills or mill privileges. Its public buildings are a stone court house and jail. *Statistics of 1840.*—Horses, 187; cattle, 997; sheep, 3,967; swine, 563; wheat, bush. 4,005; barley, 16; oats, 6,452; rye, 950; buck-wheat, 1,383; Indian corn, 3,127; potatoes, 14,525; hay, tons, 1,317; sugar, lbs. 5,185; wool, 8,044. Population, 716.

NORTON, an uninhabited township in the northwest corner of Essex county, is in lat. 44° 58' and is bounded north by Bradford and Barnston, Can., east by Averill, south by Avery's, Warner's and Warren's gore, and west by Holland. It is 12 miles long from east to west, and 4 from north to south. The land is said to be good and well timbered, considerable tracts of it with pine. The charter of the township was burnt, and it is difficult getting a valid title to the lands. There are two considerable ponds lying partly in this township. The outlet of Norton pond is the head branch of Coatacook river, which unites with the Masuippi, in Ascot, and then unites with the St. Francis, at Lenoxville. Farrand's river, also, heads here and runs south.

NORWICH, a post town in the northeast corner of Windsor county, is in lat. 43°

* Dog river took its name from the circumstance of a hunter losing a favorite dog here, before the town was settled, by being caught in a trap.

NORWICH.

NORWICH.

45' and long. 4° 42', and is bounded north by Thetford, east by Connecticut river, which separates it from Hanover, N. H., south by Hartford, and west by Sharon. It lies 40 miles southeast from Montpelier and 20 north from Windsor. This township was chartered to Eleazer Wales and others, July 4, 1761, by the name of *Norwich*, and contains about 25,000 acres. In 1762, the township was partly lotted, and the next year Jacob Fenton, Ebenezer Smith and John Slafter came here from Mansfield, Con., built them a camp, and began improvements. There were, at this time, two men in Hanover, and a small settlement in Lebanon. In July, Smith and Slafter left Fenton on Wednesday for the purpose of hoeing corn in Lebanon, and returned on Saturday evening, when they found Fenton dead in the camp. It appeared afterwards that Mr. Freeman happened over here, and finding Fenton sick and alone, he tarried with him till he died, and then went to Lebanon for help to bury him. Freeman returned, and Fenton was buried July 15, 1763, aged 65 years, and a monument erected over him. In the summer of 1764, four men moved their families into the township, and from this time the settlement advanced with considerable rapidity, mostly by emigrants from Mansfield and Preston, Con.* The town was organized in *Connecticut*. The first town meeting was held in Norwich, in 1768. The religious denominations are Congregationalists, Methodists, Baptists, Episcopalians, &c. The first Congregational church was organized in 1770, the second in 1819. The Rev. Lyman Potter was ordained over the Congregational church August 31, 1775. At this time there was no other denomination of Christians in town. Mr. Potter was dismissed in 1800, and the Rev. James Woodward was installed over the same church September 5, 1804. The Rev. Samuel Goddard was settled over the north society January 23, 1822. The Rev. R. W. Bailey was settled over the south society Nov. 24, 1819, and dismissed in November, 1825. The first meeting house was built in this town

* The above statements are made on the authority of a communication furnished by Mr. Hezekiah Goodrich, in 1814, to Capt. Josiah Dunham, for his proposed Gazetteer of Vermont. The Rev. Grant Powers, in his "Historical Sketches of the Coos country," says that Fenton's death took place in 1765, and that in 1766, when Dr. Burton came with his father to Norwich, there were but two families in town. Mr. Power's statement may be correct, and Mr. Goodrich's wrong; but I judged it best to retain the latter, till I should find means to reconcile Mr. P.'s statement with what he says elsewhere. Whether Mr. P.'s severe strictures upon the first edition of my Gazetteer were generous or just, I leave others to judge.

in 1776, and it was at that time the best meeting house in the state. The other Congregational meeting house was built in 1818. The Methodists have two meeting houses, one built in 1836, and the other in 1837, in the west part of the town. The Baptist house was built in the west part, in 1835. Among the eminent personages may be mentioned the Hon. Peter Olcott, who died here in September, 1808. He had a military command at the capture of General Burgoyne, and, afterwards, passed through every grade of military office to that of Major General. He was for some time judge of the supreme court, many years lieutenant governor of the state, and, at the time of his death, trustee of Dartmouth College. The Hon. Thomas Murdock died here in December, 1803. He was a member of the council of the state, and a judge of the county court. The Hon. Paul Brigham died here July 15, 1824, in the 79th year of his age. He served four years as captain in the revolutionary war; was five years high sheriff of the county of Windsor; a major general of militia; five years chief judge of the county court; and 22, of 24 succeeding years, lieutenant governor of the state. All of these offices he discharged to the satisfaction of his fellow citizens, and he received their suffrages for the latter till, admonished by the infirmities of age, he declined any further public service. Connecticut river washes the eastern boundary of the township, and is from 30 to 40 rods in width. It is fordable in three places at low water. Ompompanoosuc river enters the township from Thetford, two miles west of Connecticut river, and, after running three miles across the northeast corner, mingles its waters with those of the Connecticut. It is a rapid stream, with a gravelly bottom, about six rods in width, and affords several eligible mill seats. Bloody brook arises wholly in this township, and, passing a little westerly of Norwich plain, falls into the Connecticut just below the bridge leading from Norwich to Dartmouth College. On this stream are several excellent mill seats. It is said to have had its name from a bloody battle fought here during the French war. At its mouth, it is about two rods in width. On each of the above streams are some fine tracts of interval. Smalley's brook is a small mill stream which falls into Connecticut river between the Ompompanoosuc and Bloody brook. Mosher's brook rises in the south part, and unites with the Connecticut in Hartford. The timber on the meadows was originally elm, bass, ash and butternut; on the plains and hills near the riv-

NULHEGAN RIVER.

OMPOMPANOOSUC RIVER.

ORANGE.

ers, principally white pine, and further back maple, beech, birch, hemlock, &c. The surface of the township is uneven, but nearly all admits of cultivation. It produces all kinds of grain and grass, and some of the finest orchards in the state. Extensive beds of iron ore are found in the northwest corner of the township, connected with the copperas ore in Stratford. Cyanite, or sappare, is also found in this township in laminated masses, connected with quartz and mica. Beautiful specimens of actynolite are found, and anthracite in small quantities. On the bank of Connecticut river, about 70 rods above the mouth of the Ompompanoosuc, is an Indian burying ground, where human bones, stone pots, arrows, &c., are frequently found. Between the Connecticut and the Ompompanoosuc is a high bluff, where explosions were formerly heard, like the report of cannon, to the great terror of the inhabitants. The township has, generally, been very healthy. The dysentery, however, prevailed here in 1795, and carried off 60 persons, and the epidemic of 1813 was very mortal. The scarlet fever prevailed in this town and neighborhood in 1831, and produced considerable mortality. Windsor co. grammar school was incorporated and established here in 1785. *Norwich village* is pleasantly situated on Norwich plain, and contains a handsome meeting house, the Norwich university, (*see part second, page 168,*) several stores, a tavern, a considerable number of mechanics' shops, and about 40 dwelling houses. The town contains 5 meeting houses, 1 grist and 9 saw mills, and 5 stores. *Statistics of 1840.* Horses, 481; cattle, 2,348; sheep, 13,305; swine, 1,559; wheat, bus. 3,801; barley, 349; oats, 20,727; rye, 2,854; buckwheat, 1,182; Ind. corn, 11,119; potatoes, 53,480; hay, tons, 5,265; sugar, lbs. 15,730; wool, 27,639. Population, 2,218.

NULHEGAN RIVER, rises partly in Averill and partly in Wenlock. The North branch runs a southerly course through Averill, Lewis, and a part of Bloomfield, the West branch runs an easterly course through Wenlock and a part of Brunswick. They unite in Bloomfield, and, taking a southeasterly course, fall into Connecticut river a little above the northeast corner of Brunswick. This river is generally rapid, except that part of the West branch that runs through Wenlock and Brunswick, which is very still and deep, and bordered by alder meadows. Through this and Clyde river, which runs a northwest course into lake Memphremagog, the Indians formerly had their navigation from said lake to Connecticut river.

They had a carrying place of about two miles from the head of one river to that of the other, and several other carrying places by the falls and rapids in these streams. This river waters about 120 square miles, and is about 3 rods wide at its mouth.

OMPOMPANOOSUC RIVER, rises in the northwestern part of Vershire, and runs easterly into West Fairlee. It then takes a southeasterly course into Thetford, where it receives a considerable stream from Fairlee lake, which is a large body of water lying partly in Fairlee and partly in Thetford. Continuing a southeasterly course through the township, the Ompompanoosuc mingles its waters with Connecticut river in the northeastern part of Norwich. In the south part of Thetford, it receives a considerable mill stream from the west, which originates in the eastern part of Tunbridge and in Stratford. The whole length of this river is about 20 miles, and it affords a number of valuable mill privileges. The name, which is Indian, is said to signify a stream where many onions are found.

ONION RIVER. *See Winooski river.*

ORANGE, a post town in the northwest corner of Orange county, is in lat. 44° 9' and long. 4° 33', and is bounded north by a part of Plainfield, Goshen, Harris' Gore, and Groton, east by Topsham, south by a part of Corinth and Washington, and west by Barre. It lies 13 miles north of Chelsea, 13 miles east from Montpelier and 55 miles north from Windsor. It was granted Nov. 6, 1780, and chartered to Capt. Ebenezer Green, Amos Robinson, Esq. and others, August 11, 1781, containing 23,040 acres. The first settlement was commenced by Ensign Joseph Williams, in Sept. 1793, on the south line of the town. The town was organized March 12, 1796; John Sloan was first town clerk, and Ezra Paine first constable. It was first represented in the year 1800, by Thomas Storrs Paine. The religious denominations are Congregationalists, Methodists, Freewill Baptists, and Universalists, in about equal numbers. The Rev. Enos Bliss was settled over the Congregational church in 1799, and after preaching several years was dismissed. There was a small but decent meeting house erected at the centre of the town in 1823, and one of about the same dimensions erected in the southeast corner of the town, in 1825; both houses are occupied by all of the several denominations. The epidemic of 1812 carried off about 40 persons in a few weeks. Doct. Preston Chamberlin is the only professional man in town. The surface of this town is uneven, and in some parts rath-

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er broken. Knox mountain in the northeasterly part of the town is a considerable elevation, and affords inexhaustable quantities of granite for building stone. The rocks of this town are principally granite; the timber is chiefly hard wood, except along the streams, where it is spruce, hemlock, cedar, pine, and fir. The soil in some parts of the town, particularly on the heights, is rather cold and wet; in other parts and on the streams it is rich and productive. Large flocks of sheep are kept in this town, and considerable attention is paid to dairying. The principal stream of water is Jail branch. Coming from Washington, it receives a considerable stream from the north, called Cold branch, and then passes into Barre. The principal roads leading through the town are, the Market road, through from Barre on Wait's river, and the Old turnpike, leading from Barre through to Chelsea. There are in town 12 school districts and school houses, and about 300 scholars, 2 stores, 2 taverns, 1 starch factory, 1 grist and 7 saw mills, 4 blacksmith shops, and 1 tannery.—*Statistics of 1840.*—Horses, 248; cattle, 1,803; sheep, 5,184; swine, 874; wheat, bus. 2,048; barley, 637; oats, 9,610; rye, 231; buckwheat, 768; Ind. corn, 2,189; potatoes, 60,316; hay, tons, 3,412; sugar, lbs. 22,208; wool, 11,619. Population, 984.

ORANGE COUNTY, lies on the east side of the Green Mountains, about half way between the northern and southern boundary of the state. It is situated between lat. 43° 46' and 44° 13' north, and between long. 4° 15' and 4° 57' east, extending 34 miles from east to west, and 28 from north to south, and containing about 650 square miles. It is bounded north by Caledonia county, east by Connecticut river, which separates it from Grafton county, N. H., south by Windsor county, and west by a part of Washington county, and a small part of Addison county. This county was incorporated in Feb. 1781. Chelsea, lying nearly in the centre of the county, is the seat of justice. The Supreme Court commences its session here on the 5th Tuesday after the 4th Tuesday in January, and the County Court on the 3d Tuesdays of June and December. There are several pleasant villages in this county, particularly in Chelsea, Newbury, and Randolph. There are no large streams in this county. Wells river runs across the northeast corner. Connecticut river and its tributaries, particularly Ompompanoosuc and Wait's river, water the eastern and southeastern parts; the first, second and third branches of White river

water the south and southwestern parts, and Steven's branch of Winooski river, the northwestern parts. The eastern range of Green Mountains, called the height of lands, extends along the northwestern part of the county. The rocks in the northern and central parts, are almost exclusively granite, which, in many places, makes the best of mill and building stones. A range of argillaceous slate extends through the western part. Lead ore is found in Strafford, and immense quantities of the sulphuret of iron in Thetford. *Statistics of 1840.*—Horses, 6,674; cattle, 36,853; sheep, 156,053; swine, 22,516; wheat, bus. 69,565; barley, 5,265; oats, 245,878; rye, 11,933; buckwheat, 30,144; Indian corn, 120,543; potatoes, 1,055,379; hay, tons, 73,004; sugar lbs. 420,639; wool, 311,674. Pop. 27,873.

ORLEANS, a post town in the central part of Orleans county, situated in lat. 44° 53' and long. 4° 45', contains about 35 square miles. It is 49 miles northeasterly from Montpelier, and is bounded north and west by Newport, east by Brownington, and south by Irasburgh. It was granted October 23, 1784, and chartered, by the name of Coventry, to Major Elias Buel, of Coventry, Conn., and others. The name was altered to Orleans in 1841. The first settlement of the town was begun about the year 1800, and it appears from the census of this year that there were, at this time, seven persons in town. The first settlers were S. and T. Cobb, Samuel Wells, John Farnsworth, Jotham Pierce, Joseph Marsh, John Ide and others. The town was organized in March, 1803, and Joseph Marsh was first town clerk. The religious denominations are Baptists, Congregationalists, Methodists and Freewill Baptists. The Rev. John Ide was ordained over the Baptist church June 28, 1815. The Rev. Lyman Case was settled over the Congregational church in March, 1823. The present minister is the Rev. L. S. French. This society have a handsome meeting house, erected in the village in 1830, and about 2 miles east of the village is a union house. *Barton* and *Balck* rivers run northerly through this town into Memphremagog lake. These streams are from four to eight rods wide, and very deep near their mouths. There are good mill privileges in this town on Black river, and likewise on some of the smaller streams. The other waters are *South bay* of lake Memphremagog, and two small ponds. The soil is generally good. Near the lake it is, in some places, clayey, and on Black river it is somewhat sandy, but through the township, generally, it con-

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ORWELL.

sists of a deep, rich loam. Its timber is mostly maple and beech, with some elm, basswood, birch, hemlock, spruce, fir, cedar, &c. The western part of the town is somewhat broken, but not mountainous. The *village of Orleans* was commenced in the fall of 1821, by Calvin and Daniel W. Harmon, when all that part of the town was a dense forest. It is situated at the falls in Black river in the south west part of the town, and now contains a meeting house, 2 stores, 1 tavern, 1 grist and 2 saw mills, a carding machine, clothier's works, tannery, starch factory, &c., together with nearly 40 dwelling houses. *Statistics of 1840.*—Horses, 224; cattle, 1,379; sheep, 4,011; swine, 596; wheat, bus. 2,364; barley, 362; oats, 6,155; rye, 85; buckwheat, 1,635; Ind. corn, 1,892; potatoes, 39,901; hay, tons, 2,832; sugar, lbs. 38,445; wool, 7,706. Population, 796.

ORLEANS COUNTY, lies in the north part of the state, and about half way between Connecticut river and lake Champlain. It is situated between lat. 44° 28' and 45° north, and between lon. 4° 19' and 5° 4' east, being 33 miles in length and 30 miles from east to west on Canada line, and containing 700 square miles. It is bounded north by Canada, east by Essex county, south by Caledonia and Lamoille counties, and west by Lamoille and Franklin counties. It was incorporated Nov. 5, 1792, and Irasburgh, situated near its centre, is the seat of justice. The Supreme Court sits here on the 9th after the 4th Tuesday in January, and the County Court on the 4th Tuesday in June and December. The first settlement was commenced in this county in 1787, in the southwestern part, on the river Lamoille, by John McDaniel, Esq. This county contains more natural ponds than any in the state; and Memphremagog lake extends into the north part. The eastern and central parts are watered by Black, Barton and Clyde rivers, the southern part by the Lamoille, and the western part by the Missisco river. This county lies wholly between the eastern and western ranges of the Green Mountains. *Statistics of 1840.*—Horses, 3,464; cattle, 18,299; sheep, 46,669; swine, 9,750; wheat, bush. 33,315; barley, 10,997; oats, 133,301; rye, 2,400; buckwheat, 20,067; Ind. corn, 20,886; potatoes, 596,855; hay, tons, 37,291; sugar, lbs. 507,446; wool, 107,580. Population, 13,634.

ORWELL, a post town in the northwest corner of Rutland county, is in lat. 43° 48' and long. 3° 47' and is bounded north by Shoreham, east by Sudbury and a part of Whiting, south by Benson, and west

by lake Champlain, being opposite to Ticonderoga, N. Y. It lies 20 miles northwest from Rutland, 47 southwest from Montpelier, and 47 southwesterly from Burlington. This township was chartered to Benjamin Ferris and associates, Aug. 8, 1763, and contains 42 square miles. John Charter began improvements on the south end of Mount Independence, and lived here several years before the revolution. In 1776 a large body of troops was collected together in this township, the greatest part of whom was stationed at Mt. Independence, at the north end of which was a breast work, and a picket fort on the top. This mountain contains about 250 acres, and was heavily timbered, but the timber was all demolished by the soldiers. The next year Ticonderoga and Mt. Independence fell into the hands of the British, and the Americans retreated to the south. The first permanent settlement was made in 1783, by Amos Spafford, Shadrach Hathaway, Eber Murray, Ephraim and William Fisher, and John Charter, (the latter having been driven off during the war,) upon Mt. Independence. The next year the Hon. Pliny Smith and others came into the town, and from this time the settlement advanced with considerable rapidity. The town was organized Dec. 12, 1787, and David Leonard was first town clerk. The town was first represented in 1788, by Ebenezer Wilson. The religious sects are Baptists, Congregationalists, Methodists, and Universalists. Elder E. Phelps was settled over the Baptist church about the year 1789, and was the first settled minister. He preached here 5 or 6 years. The church has since been successively under the pastoral care of Elders Culver, Webster, Murray, Fishers, Sawyer, nger, and Ide. Elder Ephraim Sawyer was settled in 1821. This church was organized about the year 1784. The Rev. Sylvanus Chapin was settled over the Congregational church March 30, 1791, and dismissed May 20, 1801; Rev. Mason Knapen was settled from Jan. 1, 1808, to Aug. 24, 1819; Rev. Sherman Kellogg from June 14, 1820, to Oct. 23, 1822; Rev. Ira Ingraham from June 14, 1826, to April 18, 1832; and the Rev. Henry Morris from Oct. 9, 1834. The Congregational meeting house is at the centre, and was erected in 1805, and that belonging to the Baptists is in the eastern part. The dysentery prevailed here about the year 1804, and in the course of 60 days carried off 60 children. The epidemic of 1813 was also very mortal, and a considerable number, mostly heads of families, were victims to it. There is a tract of about

OTTA QUECHEE RIVER.

OTTER CREEK.

2,000 acres in the south part of the township, which is somewhat broken and hilly. The remaining part is very level, handsome land, and produces abundant crops of all kinds of grain. The principal streams are East creek, which rises in Benson and falls into lake Champlain on the north side of Mount Independence, and Lemonfair river, which here consists of two branches, running parallel with each other, along the eastern border, and uniting near the north line of the township. On these streams are several mill privileges, which are good during a part of the year. The waters where the land is clayey are slightly impregnated with Epsom salts, or the sulphate of magnesia. There is a spring on the lake shore, about 100 rods south from the northwest corner, the waters of which are very strongly impregnated, and, from these, salts have been manufactured in considerable quantities. In the compact limestone in this township are shells of various kinds. In the compact limestone on Mt. Independence, flint is found. Specimens of blende, or the sulphuret of zinc, have also been found in this township. The width of the lake between Mt. Independence and Ticonderoga is about 80 rods. A mile further south, at a place called Sholes Landing, it is only 40 rods wide. The average width of the lake against Orwell is about one mile, and the widest place 2 miles. May 13, 1820, a piece of land in this township, of more than 5 acres area, sunk about 40 feet, and slid into the lake. The impulse made upon the water was so great as to raise the lake 3 feet at the opposite shore, a mile and a half distant. The ground was partly covered with small trees, some of which moved off erect, while others were thrown down. There was formerly a furnace here, which did considerable business, but it is now in ruins. There are two small villages. *Statistics of 1840.*—Horses, 325; cattle, 2,066; sheep, 30,275; swine, 892; wheat, bush. 3,702; oats, 6,273; rye, 2,049; buckwheat, 153; Ind. corn, 6,456; potatoes, 16,960; hay, tons, 7,053; sugar, lbs. 5,525; wool, 77,485. Pop. 1,504.

OTTA QUECHEE RIVER, (called also Water Quechee and Quechee river,) rises in Sherburne, runs nearly east through the south part of Bridgewater; thence east northeast through Woodstock into the south part of Hartford, and thence southeast through the northeast corner of Hartland into Connecticut river, about two miles above Quechee falls. In Bridgewater it receives two considerable branches, namely, north branch, which rises in the north part of this township from the

north, and south branch, which rises in Plymouth from the south, both considerable mill streams. In Woodstock it receives two other branches of considerable size; one rising in the northeast corner of Bridgewater and southeast corner of Barnard, falls into Quechee river from the north just below the north village in Woodstock, the other rising in the south part of Woodstock, passes through both the villages in that town, and empties into it from the south just above the mouth of the last mentioned stream. Both these streams afford excellent mill seats. Quechee river, in its course, receives numerous other tributaries of less note. It is a clear and lively stream, with a gravel or stoney bottom. There are eight bridges across this river after it leaves Sherburne, viz: four in Bridgewater, two in Woodstock, one in Hartford, and one in Hartland; and 8 dams, on which mills and other machinery are erected, viz: two in Bridgewater, three in Woodstock, two in Hartford and one in Hartland. This stream is about 35 miles in length, and waters about 212 square miles. The name of this stream is of Indian origin, and is said to signify quick whirling motion, and was probably given on account of appearances exhibited at the falls near its mouth.

OTTER CREEK, is the longest stream in Vermont. It originates in Mount Tabor Peru, and Dorset, within a few rods of the head of the Battenkill. In Dorset it turns suddenly towards the north and returns into Mount Tabor, running nearly north through the western part of this township and Wallingford, and through the central part of Clarendon into Rutland; it then takes a northwesterly course through Pittsford and Brandon; between Leicester and Salisbury on the east, and Whiting and Cornwall on the west; through the western part of Middlebury; between New Haven and Weybridge; through the northeast corner of Addison; between Waltham and Panton; and through Vergennes and Ferrisburgh into lake Champlain. From the southwest it receives in Ferrisburgh a large creek which originates in Bridport; in Weybridge Lemonfair river, from Orwell and Shoreham; in Rutland Little West river, or Furnace brook, from Tinmouth; and in Mount Tabor Mill river, from Danby. From the east it receives New Haven river in New Haven, Middlebury river in Middlebury, Leicester river in Leicester, Furnace river in Pittsford, East creek in Rutland, and Cold river and Mill river in Clarendon, all of which are considerable mill streams. Otter Creek above Middle-

PANTON.

PASSUMPSIC RIVER.

PAWLET.

bury is a very still stream, and its waters deep, affording very few mill privileges. From Middlebury to Pittsford, a distance of 25 miles, it is navigable for boats. At Middlebury, Weybridge and Vergennes, are falls in the creek, which afford excellent sites for mills, and on which are some of the finest manufacturing establishments in the State. From Vergennes to the mouth, a distance of 8 miles, the creek is navigable for the largest vessels on the lake. The alluvial flats along this stream are very extensive, and are inferior to none in the state. Its whole length is about 90 miles, and it waters about 900 square miles. Otter creek was named by the French *la Riviere aux Loutrés*, the River of Otters, long before any settlements were made by the English within this state.

Oxbow. Name given to two bends in Connecticut river in Newbury, distinguished as the *Great* and *Little Oxbow*.

PANTON, a post township in the western part of Addison county, is in lat. 44° 8' and long. 3° 40', and is bounded north by Ferrisburgh, east by Otter creek, which separates it from Waltham, and by a part of Vergennes, south by Addison, and west by lake Champlain, which separates it from Elizabethtown, N. Y. It lies 13 miles northwest from Middlebury, and 25 southwesterly from Burlington, and was chartered Nov. 3, 1764, containing 10,530 acres. A settlement was commenced here in 1770, by John Pangborn and Odle Squire, from Cornwall, Con., who were soon joined by Timothy Spalding and others, from the same place, and by Peter Ferris, from Nine Partners, N. Y. Ferris settled at the bay where Arnold blew up his fleet during the revolution. The wrecks of this fleet are now to be seen here at low water. During the revolution this settlement was broken up. Most of the men were made prisoners, their dwellings burnt, and the women and children driven to the south. The settlers returned after the war, and in 1784 the town was organized. Elijah Grandy was first town clerk, and Peter Ferris was first representative, chosen in 1787. Elder Henry Chambers was ordained over the Baptist church in this town, in the year 1800, and was dismissed in 1804, and Elder Jeremy H. Dwyer was ordained in 1817, and dismissed in 1818. The Baptists have a meetinghouse, erected 1808. The Congregationalists here belong to the church in Addison. Peter Ferris lived to the age of 96 years, had four wives and died a widower. This is a very level township. The only stream of consequence is Dead

Creek which runs northerly nearly through the centre, and unites with Otter creek in Ferrisburgh. It is a wide sluggish stream. There is not a good mill privilege in the township. *Statistics of 1840.*—Horses, 151; cattle, 1,050; sheep, 9,886; swine, 318; wheat, bus. 671; oats, 3,460; rye, 108; buck-wheat, 243; Indian corn, 2,338; potatoes, 5,722; hay, tons, 2,971; sugar, lbs. 220; wool, 24,890. Population, 670.

PARKER'S GORE, now a part of Sherburne.

PARKERSTOWN. Name altered to Mendon, Nov. 6, 1827. *See Mendon.*

PASSUMPSIC RIVER has its source in a pond on the easterly line of Westmore, and, running a southeasterly course thro' Newark, passes into the west corner of East Haven; thence it pursues nearly a south course through Burke, Lyndon, St. Johnsbury, Waterford and Barnet, and falls into the Connecticut a mile below the foot of the fifteen mile falls. From its source till it approaches near the centre of Lyndon, it is a swift stream. It then meanders through a rich tract of intervalle till it approaches the south line, where is a high fall. The greatest part of the way through St. Johnsbury it is swift, but in a few places it runs slow through excellent intervalle land; and through Waterford and Barnet it runs slow through rich flat land, though there are some large falls in Barnet. It is generally deep, and is between four and six rods wide below St. Johnsbury plain. It receives several large branches in Lyndon, two in St. Johnsbury and one in Barnet. Its length is about 34 miles. The name of this stream is said to be derived from the Indian phrase *Bas-soom-suc*, signifying a stream where there is much medicine.

PAWLET, a post town in the southwest corner of Rutland county, is in lat. 43° 21', and long. 3° 54', and is bounded north by Wells, east by Danby, south by Rupert, and west by Granville, N. Y. It lies 33 miles north from Bennington, and 21 southwest from Rutland. It was chartered Aug. 26, 1761, to Jonathan Willard and others, containing 23,040 acres. The settlement of this township was commenced in 1761, by Simeon Burton, and William Fairfield. The next year Capt. Jonathan Willard, who owned 22 rights of land here, equal to 7,920 acres, came into town with 8 or 10 hired men, and Messrs. Rush, Fitch, and others about the same time. In 1769 the town was organized, and Simeon Burton was first town clerk. The religious denominations are Baptists, Congregationalists, Episcopalians, Meth-

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odists, and Universalists. The Congregational church was organized August 8, 1781. The Rev. Lewis Beebe, the first settled minister, was settled over it from June 14, 1787, to May 6, 1791; the Rev. John Griswold from October 23, 1793, to August 11, 1830. The Rev. Elijah W. Plumb, the present minister, was settled May 18, 1831. They have a handsome meeting house erected in 1797, situated in a small village, about one mile south of the centre of the township. The Baptist church was organized Oct. 4, 1791. In the year 1800 they erected a large meeting house in the western part of the township, and Oct. 17, 1802, settled the Rev. Isaac Bealls. There is a small Episcopal church here, which is called *Trinity church*. Mr. Rush, one of the first settlers, died here in March, 1824, aged 110 years. The principal streams are Pawlet river, which runs southwesterly nearly through the centre of the township, and Indian river, which runs the same course across the southwest corner. The latter rises from a spring of pure water, sufficiently large to carry a grist mill. It abounds in trout, and takes its name from the great number of Indians who formerly resorted here for the purpose of fishing. The township is divided nearly in the centre by a range of mountains extending through it from south to north. The most remarkable summit is a little north of the centre, and is called Haystack mountain. The soil is dry and warm, easily cultivated, and produces good crops of grain and grass. The timber is maple, beech, birch, elm, bass, ash, walnut, oak, hemlock and pine. There are here 1 oil, 3 saw, 1 grist and 5 fulling mills, 2 carding machines, 4 woollen factories, 1 cotton factory, 7 stores, 3 taverns, and 1 tannery. *Statistics of 1840.*—Horses, 369; cattle, 2,335; sheep, 20,705; swine, 1,409; wheat, bus. 2,477; oats, 12,215; rye, 3,244; buckwheat, 287; Indian corn, 10,950; potatoes, 41,920; hay, tons, 6,931; sugar, lbs. 10,300; wool, 49,422. Population, 1,748.

PAWLET RIVER is a small stream which rises in Dorset, runs northwesterly across the northeast corner of Rupert, diagonally across the township of Pawlet, and unites with Wood creek, in the state of New York, 2 or 3 miles above its mouth. This stream affords a number of eligible mill seats in Vermont.

PEACHAM, a post town in Caledonia county, situated in lat. 44° 20' and long. 4° 47'. It is 20 miles east from Montpelier, and 18 northwesterly from Newbury. It is bounded northerly by Danville, easterly by Barnet, southerly by Groton, and westerly by Marshfield and Cabot. It

was chartered December 31, 1763. In 1773, that part of Peacham called "the square," was allotted, and several pitches made. In 1774, pitches were made by Jonathan Elkins, John Sanborn, Frye Bailey, John Skeel and Robert Carr, and the same year a line was run from Connecticut river in Barnet through Peacham to Missisco bay on lake Champlain. This line was of great use to our scouts and to deserters from the enemy during the revolutionary war. In the spring of 1775, Jonathan Elkins came to Peacham, with several hired men, and began improvements upon the lot he had pitched the year before. His farm in Haverhill, N. H., he had sold on a credit of several annual payments; but, on account of the depreciation of the currency, after two or three of the first payments, the purchaser paid at the rate of three, four and five bushels of corn for a hundred dollars. In March, 1776, several companies, belonging to Col. Beedel's regiment marched through Peacham to Canada, upon snowshoes, on the line run in 1774. The same spring Gen. Bailey had orders to open a road from Newbury to St. Johns, for the conveying troops and provisions into Canada. He had it cut from Newbury six miles above Peacham, when the news arrived that our army had retreated from Canada, and the undertaking was abandoned. Jonathan Elkins had removed his family to Peacham in June of this year, but, after a stay of three weeks, was obliged to retreat with Gen. Bailey's men to Newbury, where he remained until the October following. He then removed his family again to Peacham, where they remained during the war. Only three families spent the succeeding winter in Peacham, viz; Jonathan Elkins', John Skeel's and Archibald McLachlin's. In 1777, James Baily, Asher Chamberlain and Noah Hollyday removed their families here. Henry Elkins was born on the 15th of October of this year, and was the first child born in town. In 1778, the inhabitants of Peacham were in constant alarm. Our scouts frequently discovered signs of Indians, and informed the inhabitants as they passed and repassed. During this year, a number of prisoners and British deserters found their way through from Canada, and arrived at Peacham in a very weak and famishing condition. The inhabitants had to go to Newbury for their grinding, and a considerable part of the time in the winter, with no other than a snow shoe path. In 1779, Gen. Hazen came to Peacham with a part of his regiment, for the purpose, as he said, of completing the road commenced by Bailey in

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1776, that an army might be sent through for the reduction of Canada. But this was only a feint for dividing the enemy and preventing their sending their whole force up the lakes. Hazen cut, cleared and made a passable road for 50 miles above Peacham, through the towns of Cabot, Walden, Hardwick, Greensborough, Craftsbury, Albany and Lowell, and erected several block-houses. This road was a great benefit to the settlers of this country after the war, and, in many places, it is still called the "*Hazen Road*." The present road from Peacham to Lowell, occupies the same ground over which the Hazen road passed. Hazen marched to the south in the fall, abandoning all the block-houses, except the one 12 miles above Peacham, and committing this to the care of a sergeant's guard. In the spring of 1780, Capt. Aldrich came to Peacham and built a small picket around the house of James Bailey, and the block-house above was abandoned. In the fall Aldrich marched his men to the south, leaving the inhabitants to look out for themselves. Col. Thomas Johnson, of Newbury, who had engaged to erect mills in Peacham, arrived at Jonathan Elkins' with the mill stones, on the evening of the 7th of March, 1781. About one o'clock next morning a party of the enemy from Canada came upon them, and made prisoners of Col. Johnson, Jacob Page, and Col. Jonathan Elkins, of Peacham, who was then a youth. They were all carried to St. Johns. Col. Johnson returned on parole, Mr. Page was sent to Montreal, and Col. Elkins to Quebec, and the two latter imprisoned. In the fall, when the British fleet sailed from Quebec, Col. Elkins was sent a prisoner to England with about 150 more who were distributed throughout the fleet and obliged to do duty. When the fleet arrived at Plymouth, England, the prisoners were confined in Mill prison, where they remained until they were exchanged for Cornwallis' troops, in 1782, when Col. Elkins returned again to Peacham. Capt. Nehemiah Lovewell was stationed with his company in Peacham during the summer of 1781. In September, he sent a scout of four men up the Hazen road, who were ambushed and fired upon by the Indians. Two were killed and scalped, and the other two taken, and on the tenth day, after they left Peacham, they were prisoners in Quebec with Col. Elkins. There were no soldiers kept at Peacham in 1782, and two Messrs. Baileys of this town were carried prisoners to Canada. Peacham was organized March 18, 1783, and James Bailey was first town clerk.

The greater part of the people of this town are Congregationalists. A Congregational church was organized here April 14, 1794, consisting of 12 members. October 30, 1799, they settled the Rev. Leonard Worcester for their pastor, and he has continued his connection with the church ever since, though, on account of age and infirmity, he has ceased to preach. At the time of Mr. Worcester's ordination the church consisted of 40 members. The most remarkable revival, which has taken place, was in 1817 and '18, in consequence of which there was an addition to the church of 225 members. The whole number admitted since its organization is 611, and the present number 266. From a bill of mortality kept by Mr. Worcester, it appears that the whole number of deaths in this town, from the 30th of October, 1799, to September, 1824, was 406. The greatest number in any year was 59, and the least 6. Mrs. Hunt, the oldest person who has died in this town, was aged 96. Caledonia county grammar school was established here by act of the legislature, October 27, 1795. The building was erected, and the school commenced in August, 1800. The institution is under the direction of nine trustees. The school has been prosperous. The average number of scholars from 30 to 40. *Onion river pond*, so called from its giving rise to one of the principal branches of Onion or Winooski river, lies in the western part of the town, and covers about 300 acres. There are several other small ponds, which are not worthy of particular notice. There are two considerable streams passing off to the east into Steven's branch, which afford numerous mill privileges. A ridge of land passes through the western part, but there is no very considerable elevation in this town. The western part is a hard soil, but the eastern is rich and pleasantly diversified with hills and vallies, being inhabited by a great number of respectable and wealthy farmers. There is, in the eastern part of the town, a natural bog meadow, containing an inexhaustible quantity of shell marl, from which lime has been manufactured to considerable extent. The color of the marl is a bluish white. There is also a plenty of limestone, from which lime is made. One of the most remarkable occurrences in this town, was the loss of a man's great toe, by frost, in the month of June. Mr. Walker, the gentleman who sustained the loss, was 84 years old, and was frozen, in consequence of being lost in the woods, and lying out through the night of the 8th of June, 1816. There is a small village, situated on an elevated

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spot near the centre of the town, which is a place of some business. The public buildings, in town, are a meeting house and an academy, both standing a little out of the village to the southwest. The market road leading from Boston to Montreal through Newbury, passes through the village, and also the county road from Chelsea to Danville. There are in town 3 stores, 1 grist, 1 fulling and 6 saw mills, 1 carding machine, and 2 woollen factories. *Statistics of 1840.*—Horses, 373; cattle, 1,910; sheep, 9,228; swine, 1,055; wheat, bus. 5,491; barley, 730; oats, 23,603; rye, 90; Indian corn, 2,377; potatoes, 67,816; hay, tons, 4,001; sugar, lbs. 21,180; wool, 17,786. Population, 1,443.

PERU, a post town in the northeast corner of Bennington county, is in lat. 43° 15' and long. 4° 8', and is bounded north by Mount Tabor, east by Landgrove, south by Winhall and west by Dorset. It lies 30 miles northeast from Bennington, and the same distance southwest from Windsor. It was chartered October 13, 1761, by the name of Bromley, and contains, by charter, 23,040 acres. The settlement of this township was commenced about the year 1773, by William Barlow, from Woodstock, Con. The town was organized March 1, 1802. John Brock was first town clerk, and Reuben Bigelow, Esq., first representative. The religious denominations are Congregationalists, Episcopalians, Methodists and Baptists. The Rev. Oliver Plympton was ordained over the Congregational church December 29, 1813, and died the next year. The Rev. Thomas Baldwin is the present minister. This society have a meeting house, which was erected in 1814. The other societies are small. In the years 1809 and '10, and 1813 and '14, the inhabitants of this township suffered much from sickness. The prevailing disorders were the measles, canker and fevers, and they were, in many cases, mortal. This township lies upon the Green Mountains, and much of it is high and broken. There are two natural ponds, one covering about 40 and the other about 60 acres. The eastern part is watered by some of the head branches of West river. The best road across the Green Mountains in the state, south of Montpelier, passes through this township. There are 2 grist and 3 saw mills, 2 taverns and 1 tannery. *Statistics of 1840.*—Horses, 87; cattle, 717; sheep, 1,053; swine, 244; wheat, bus. 534; barley, 170; oats, 4,430; rye, 218; buckwheat, 850; Indian corn, 320; potatoes, 23,100; hay, tons, 1,290; sugar, lbs. 7,640; wool, 1,610. Population, 578.

PITTSFIELD.

PHILADELPHIA. A township was chartered by this name March 14, 1761; November 9, 1814, the north half of it was annexed to Goshen, and the remainder of it annexed to Chittenden, Nov. 2, 1816.

PHILADELPHIA RIVER is a small stream which rises in the south part of Goshen, runs southwest through Chittenden, and unites with East creek, in Pittsford.

PIKE RIVER. See *Berkshire*.

PITTSFIELD, a post town in the northeast corner of Rutland county, is in lat. 43° 48' and long. 4° 14', and is bounded easterly by Rochester, southeasterly by Stockbridge, and westerly by Chittenden and Goshen. It lies 35 miles southwest from Montpelier, and 17 northeast from Rutland. It was granted November 8, 1780, and chartered to Samuel Wilcox and others, July 29, 1781, containing about 12,000 acres. The settlement was commenced in 1786, by Thomas Hodgkins, Stephen Holt, George Martin, Daniel and Jacob Bowe, and a Mr. Woodard. The town was organized March 26, 1793. Thomas Hodgkins was the first town clerk, and also the first representative. The religious denominations are Congregationalists and Methodists. The Congregational church was organized in 1793. Rev. Justin Parsons was settled over it from September, 1814, to 1831. Rev. Samuel Sparhawk, the present minister, was settled March 29, 1839. Their meeting house was erected in 1820. The Methodist church was organized in 1804, and has generally been supplied by circuit preachers. Their present minister is the Rev. J. L. Slason. The dysentery prevailed here in 1803, and was very mortal, particularly to children, and the epidemic of 1813 was also very fatal. The victims of the latter were mostly adults. Two streams, one from the west, and the other from the south, unite near the centre of the township, forming Tweed river, which falls into White river in Stockbridge. These streams afford several good mill privileges. White river runs across the eastern corner. The township is mountainous, and the most important elevation is called Wilcox's peak. The timber is such as is common to the mountain towns. The turnpike from Bethel to Rutland passes through the township along Tweed river. There are here 3 saw, 1 grist and 1 fulling mill, 2 stores, 2 taverns and 1 tannery. *Statistics of 1840.* Horses, 117; cattle, 729; sheep, 2,358; swine, 390; wheat, bus. 584; barley, 14; oats, 1,956; rye, 294; buckwheat, 818; Indian corn, 1,531; potatoes, 16,373; hay, tons, 1,632; sugar, lbs. 19,220; wool, 5,220. Population, 615.

PITTSFORD.

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PITTSFORD, a post town in Rutland county, is in lat. $43^{\circ} 43'$ and long. $4^{\circ} 2'$, and is bounded north by Brandon, east by Chittenden, south by Rutland, and west by Hubbardton and a small part of Ira. It lies 60 miles north of Bennington, and 44 southwest from Montpelier, and was chartered October 12, 1761, containing 25600 acres. The settlement of this township was commenced in the year 1769, by Messrs. Gideon and Benjamin Cooley from Greenwich, Mass., but they were soon joined by Roger Stevens, Felix Powell, Ebenezer Hopkins, Stephen Mead, Moses Olmsted, Edward Owen, Joshua Woodward and others, from Massachusetts and Connecticut. The first records of this town were accidentally burnt, and therefore the time of its organization has not been ascertained. It was probably in the year 1770. Col. Benjamin Cooley was first town clerk, and Jonathan Fasset first representative. During the revolutionary war two picket forts were erected in this township, one called Fort Mott and the other Fort Vengeance. The latter was built early in the year 1779, upon an eminence on the east side of Otter creek, and near the present stage road from Pittsford village to Middlebury. Pittsford was a frontier township, and Fort Vengeance the most northerly post in Vermont, on the west side of the Green Mountains, which was held by the Americans during the revolution. The religious denominations are Congregationalists, Baptists and Methodists. Elder Elisha Rich was the first settled minister, and was ordained over the Baptist church about the year 1784. Elder Rich, after preaching here a number of years, left the town, and was succeeded by Elder Wm. Harrington, who was dismissed about the year 1819. The Rev. Eleazer Harwood was settled over the Congregational church about the year 1785, and continued its pastor till his death, which happened in 1807. December 30th, of this year, the Rev. Holland Weeks was ordained over this church, and dismissed in 1814; the Rev. Asa Messer was ordained Jan. 29, 1818, and dismissed February, 1822; and the Rev. John Ingersoll, Dec. 18, 1823, and dismissed in September, 1826. The Rev. Willard Child, the present minister, was settled April 25, 1827. The Congregational, Baptist, and Methodist societies have each a convenient meetinghouse, two of which are situated in the village near the centre of the township. There have been two general revivals of religion, the former in 1784, and '5, and the latter in 1802, and '3. The dysentery was very mortal here in 1803,

and in the latter part of summer carried off 40 persons in the course of 4 weeks. The epidemic of 1812 and '13, was also very fatal, particularly to heads of families. Mrs. Elizabeth Smith one of the first settlers, lived to the age of 96 years, Mr. Elisha Adams to his 92d or 93d year, and several others to nearly the same age. Mary, daughter of Ebenezer Lyman, was born in this town June 20, 1784, and died January 23d, 1794. In September previous to her death, being but little more than 9 years of age, she weighed 174 pounds, and at the time of her death, probably weighed 200 lbs. She was a healthy child, with good common sense, and her strength was equal to her size. She caught a slight cold, and was somewhat unwell for about two weeks before she died, but ate a hearty breakfast on the morning preceding her death. Otter creek, which flows through the middle of this township, from south to north, with a gentle meandering current, is the principal stream, and its width here is from 40 to 50 yards. Furnace brook, a considerable tributary of Otter creek, is formed by the union of East creek, and Philadelphia river. Along these streams are extensive meadows of the rich alluvial soil. On Furnace brook and its branches are numerous mill privileges which are well improved. There are two ponds, one in the southeastern part covering about 20 acres, and the other in the northeastern covering about 30 acres. There are no mountains. A range of hills extends along the west line between this township and Hubbardton. The soil is generally loam, with some tracts which are sandy, and some of clay. The timber is oak of several kinds, pine, maple, beech, birch, elm, basswood, ash, cherry, butternut, walnut, poplar, &c. This township abounds in iron ore, which makes the best of ware, and bar iron, and has inexhaustable quarries of excellent marble. The iron ore yields about 25 per cent. of metallic iron. The marble is coarse grained and somewhat flexible. Much of it is conveyed down Otter creek to Middlebury, to be sawn and manufactured into jambs, &c. The oxyde of manganese is also found in this township. In the eastern part of the township is a deep cavern in which ice may commonly be found in the months of July and August. There is a small village near the centre of the township, containing two meeting houses, three stores, one druggist shop, two taverns, several mechanics' shops, and about 30 dwelling houses. It is situated eight miles north from Rutland court house. Another called *Mill village* is sit-

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uated on Furnace brook, containing two stores, a saw and grist mill, woollen factory, &c. Pittsford contains one of the best town libraries in the state. It consists of 1500 volumes, towards the purchase of which a Mr. McClure, of Mexico, gave \$400. The town is divided into 13 or 14 school districts. There are 1 grist and eight saw mills, two woollen factories, 4 stores, 3 taverns, 2 tanneries, 2 furnaces, and an extensive bed of iron ore. *Statistics of 1840.*—Horses, 333; cattle, 1,796; sheep, 22,052; swine, 536; wheat, bus. 1,837; barley, 5; oats, 10,121; rye, 2,177; buck wheat, 864; Ind. corn, 13,425; potatoes, 30,661; hay, tons, 7,162; sugar, lbs. 20,539; wool, 54,128. Population, 1,927.

PLAINFIELD, a small post town in the eastern part of Washington county, in lat. 44° 14' and long. 4° 35', and is bounded north by Marshfield, east by Goshen gore, south by Barre and Orange, and west by Montpelier. It lies 55 miles north from Windsor, and 21 northwest from Newbury, and was chartered to Gen. James Whitelaw, and others, Oct. 27, 1788, containing 10,000 acres. The settlement was commenced about the year 1794, by Theodore Perkins, Joseph Batchelder, and Seth Freeman. They were joined the next year by Jonathan and Bradford Kinney, Moulton Batchelder, John Moore and others, from different parts of New England. The titles to the lands, under which the first settlers purchased, proved to be bad, and they were mostly obliged to purchase a second time. But by the indulgence of the Hon. Heman Allen, into whose hands the lands fell, the inhabitants were mostly enabled to retain the farms on which they had commenced improvements. The town was organized under the name of St. Andrew's gore, April 4, 1796, and Harvey Bancroft was first town clerk, who was the same year killed by the fall of a tree. November 6, 1797, the name of the township was altered to Plainfield. The first town meeting under this name was March 20, 1798, and Thomas Vincent, Esq. was then chosen town clerk. A small Congregational church was organized here about the year 1796, or 1797, a Methodist church about the year 1800, and a Universalist society about the year 1820. The Congregational church has, for a part of the time, enjoyed the labors of the Rev. Jonathan Kinney, and this and the other societies have been supplied to a considerable extent, by itinerant preachers. The Rev. James Perry, a Methodist preacher, died here May 13, 1840, aged 83. The township is watered by Winooski river

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which passes through the northwest corner, and by Great brook, which passes through the township in a northwesterly direction into Winooski river. At the junction of these streams is a small village, containing a Congregational and Methodist meeting house, two stores, one tavern, one tannery, &c. There is a small pond in the eastern part which is well furnished with excellent trout. There is also a mineral spring similar to those in Newbury, which is a place of some resort for invalids. It is situated so near the margin of Great brook as to be overflowed at high water. The surface of this township is uneven, but is well timbered. There is but little waste land and the soil is generally of a good quality. The town is divided into seven school districts. There are here three saw and two grist mills, one fulling and one clover mill. *Statistics of 1840.*—Horses, 190; cattle, 1,145; sheep, 8,853; swine, 414; wheat, bus. 4,298; barley, 28; oats, 4,225; rye, 199; buck wheat, 314; I. corn, 1,036; potatoes, 26,316; hay, tons, 2,832; sugar, lbs. 13,980; wool, 11,201. Population, 880.

PLATT OR PLOTT RIVER. *See Laplot.*

PLYMOUTH, a post town in the western part of Windsor county, is in lat. 43° 31' and long. 4° 19', and is bounded north by Bridgewater, east by Reading, south by Ludlow and a part of Mount Holly, and west by Shrewsbury. It lies 15 miles nearly west from Windsor, 52 south from Montpelier, and 16 southeast from Rutland; and was chartered July 6, 1761, by the name of Saltash. The settlement of this township was commenced in 1777, by John Mudge, who was soon followed by Aaron Hewett and others. Wm. Mudge was the first child born, and received in consequence a lot of land. The town was organized about 1787. Adam Brown was first town clerk, and Moses Priest first representative. The religious societies are Congregationalists, Baptists, Methodists, Christians, and Freewill Baptists. The Congregational church was formed in 1806, and the Rev. Prince Jennie settled over it for 5 or 6 years. In 1822, Rev. Abel Manning was settled over it and continued about three years. The Baptist church is the most numerous and their present minister, the Rev. Ambler Edson. Elder Isaac Banister was the first minister of the Christian church, in 1819, and he was succeeded by Elder Noah Johnson, but the society is now destitute of a minister. The Freewill Baptist church consists of 52 members. A union meeting house was built in the south part of the town, in 1816. The principal

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stream in this township is Black river, which is formed here, and runs southeasterly into Ludlow. On this stream are several good mill seats and a number of natural ponds, which abound in fish. Two considerable branches of Quechee river also rise in this township. A large share of the rocks are primitive limestone, which makes the best of lime. Not less than 2,000 hogheads are annually manufactured and transported to different parts of the country. Some of the limestone makes excellent marble, and in 1834 a factory, where 150 saws can be put in operation, was erected on Black river, for its manufacture. Some of the marble is white and some beautifully variegated. The surface of the township is considerably broken. Two mountains extend through it parallel to the river, and at no great distance from it. That on the north-eastern side is very abrupt, and is known by the name of Mount Tom. Near the meeting house is an extensive bed of statite, or soapstone. At the foot of the mountain on the southwestern side of the river, and about 80 rods from it, are situated the Plymouth caverns. (See Part 1st, page 8.) This cavern was discovered about the 1st of July, 1818. The author of this work visited it about the 10th of the same month, and explored the several apartments, an account of which was published soon after in the Vermont Journal. At this time numerous stalactites were suspended from the roof and sides of the cavern, the greater part of which were rudely beaten off and carried away by the numerous visitants (amounting to several thousands) with which the cavern was thronged during that summer. The rocks are limestone, and the cavern was probably formed by the removal of the earth from among the rocks by water. For the following very full and interesting account of Tyson Furnace, in this town, and of the minerals in the vicinity, I am indebted to the kindness of Mr. R. H. Washburn, of Ludlow.

Tyson Furnace, so named from the proprietor, is situated in the southern part of Plymouth, within a few rods of the boundary line between that town and Ludlow. It owes its existence to Mr. Isaac Tyson, Jr., of Baltimore, who has probably done more than any other individual to develop the internal resources of the state, having previously been connected with the extensive copperas works at Strafford. Although the existence of a large quantity of iron ore in the vicinity had been inferred for many years previous, from the frequent discovery of specimens lying loose upon the surface of the earth, noth-

ing particular had been done to ascertain the fact, until 1835, when Mr. Tyson, crossing the mountain near the head of Black River—which takes its rise between a high elevation on the east, called 'Mount Tom,' and the range of mountains of the west—discovered here several pieces of ore, which proved to be the micaceous and magnetic oxydes of iron. The appearance of these led him to institute a further examination, and accordingly the ensuing spring he despatched Mr. Joseph Martin, his former agent at Strafford, and on whom he relied as an experienced miner, to make a thorough search in the vicinity. This resulted, in a short time, in the discovery of the bed of brown hematite which has since been opened, lying about 6 miles south of the place where the ore was first discovered. Large masses of this ore had been previously found about the place, and quantities of it had been removed to the nearest iron works in order to be wrought. Some years previous the company at Pittsford had sent a Mr. Buel to make experiments upon the same, all of which had proved successful. In 1837 Mr. Tyson commenced the erection of his works, which were put in operation the same year; they consist of a very large blast furnace, besides a small one for convenience. The specimens first discovered by Mr. Tyson near the head of Black River, were part of a rich vein of rock ore. An excavation was immediately commenced here, and the ore, when smelted, is said to produce the best of wrought iron. A combination of the two kinds, however, is generally used in the castings. Two other excavations were also made, one about 5 miles north of the furnace, and the other 2 miles south, in the town of Ludlow. Another location of ore, apparently of a superior quality to the others, has been discovered about a mile and a half east of the furnace, called sparry or spathic, and sometimes *steel ore*, from the fact that steel may be procured from it without the subsequent process; from the beautiful rhomboidal surfaces, which it presents, it appears to be a crystallized carbonate. The bed of brown hematite above mentioned, is situated about one fourth of a mile west of the furnace, and is nearly parallel with the side of the mountain, forming an angle with a perpendicular of 65°. A shaft was sunk to the depth of 70 feet, but it becoming necessary to drain the mine, a drift was dug, extending horizontally about 80 rods. The excavation in the ore bed has already proceeded over 400 feet. Another shaft has recently been sunk a few rods west of the first; the ore was reached at a depth

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of 35 feet from the surface. In draining off the mine a large bed of sand was discovered, which has proved very serviceable for moulding. The various kinds of ore which have been found here, and all of them of a superior quality, render this one of the most favorable locations in the country; and the iron, which is produced by compounding them together, is believed to be superior to any other in New England, and is said to be equal to the best of foreign importation. Through the enterprise of the proprietor, a flourishing village has already sprung up here. A store and a ware-house are connected with the works, as are also all the necessary mechanical shops. In order to secure the complete success of his undertaking, Mr. Tyson had previously purchased all the wood land in the vicinity, in order to be well supplied with the necessary article of fuel, and so extensive are the forests around, and so apparently inexhaustible the mines which have been already developed, that there is little doubt but the establishment will be able in a short time to supply the whole country with the important product of iron. The average number of hands connected with the furnace is about 100. The castings and pig iron amount in the year to about 600 tons. The stoves and other articles sent forth have already reached most of the New England states, and obtained a decided preference. The present manager is Mr. Martin, and the agent Mr. Augustus Haven. A post office, of the same name, has been established here, and a stage runs daily through the place. All that has been already accomplished has been done without the aid of an act of incorporation, and the proprietor intends still further to enlarge his undertaking, by erecting a rolling mill and nail factory. The works are favorably situated 5 miles north of the village in Ludlow, and 17 southwest from Woodstock. The village has sprung up as if by enchantment, among the mountains, and, from its romantic location, offers inducements to the admirer of whatever is grand in the works of nature. In the immediate vicinity are three beautiful sheets of water, two of which are well stocked with the lake fish, and are about a mile in length. In the north part of the town lie the Plymouth caves, imbedded in the side of the mountain. To the lover of the natural sciences, and particularly to the mineralogist and geologist, the locality is a matter of interest. The Green Mountain range seems here to display gratuitously its internal wealth. Large quantities of plumbago have been found in the

vicinity. Considerable manganese has been exported from thence, and specimens of copper ore are occasionally discovered. A large bed of steatite lies about a mile and a half to the east. Nearly all the minerals common in the state, are found in different parts of the town. Limestone exists in great abundance. A few miles north of the iron works is a valuable quarry of marble, which has been wrought to considerable advantage. It consists of several different kinds, varying in color and quality; the most beautiful of which, as well as the most valuable, is a dark clouded; the others consist of different shades of white and sienna. The success which has thus far attended the establishment of Mr. Tyson, seems almost unparalleled; and if we may judge of its future success from its past and present, we may readily infer that it will become, at no distant period, one of the leading places in the state.

Plymouth is a good grazing township, and there are here some excellent dairies. It is divided into fifteen school districts, with school houses. There are three grist and thirteen saw mills, one trip hammer shop, two stores, two taverns and one tannery. *Statistics of 1840.*—Horses, 275; cattle, 1,739; sheep, 8,144; swine, 537; wheat, bus. 1,910; barley, 384; oats, 6,676; rye, 645; buck wheat, 1,333; ind. corn, 3,374; potatoes, 59,840; hay, tons, 4,127; sugar, lbs. 13,480; wool, 17,165. Population, 1417.

Pocock. Name altered to Bristol, October 21, 1789. See Bristol.

POMFRET, a township in the north part of Windsor county, is in lat. 43° 42' and long. 4° 31', and is bounded north by Sharon, east by Hartford, south by Woodstock and west by Barnard. It lies 18 miles north from Windsor, and 40 south from Montpelier; was chartered July 8, 1761, to Isaac Dana and associates, and is seven miles long and five and a half wide. The settlement of this township was commenced in the spring of 1770, by Bartholomew Durkee, from Pomfret, Conn., who came into it with his family, consisting of a wife and five children, on the 6th day of March. In coming into the town, the family proceeded on foot, upon a snow-shoe path, six miles, drawing their furniture upon handsleds. In the course of a few days, they were joined in the settlement by Mr. John Cheedle and family. John, son of B. Durkee, was born December 25, of this year, and was the first child born in town. The proprietors made him a present of 100 acres of land. In 1771, Wm. Wilson came into the township from Connecticut, and, a few weeks after, his

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wife and three children followed him the whole distance on foot. In the course of two years, the settlement was increased by a great number of families, among whom were John W. Dana, Seth Hodges and Benjamin Bugbee. Mr. Dana built the first grist mill, soon after he came into town, upon a small stream, which empties into White river. The town was organized in March, 1773, and John W. Dana was chosen town clerk. At this meeting John Throop was chosen justice of the peace, and three constables were appointed, and but two highway surveyors. The town was first represented in 1778, by John Throop. The first settled minister was the Rev. Elisha Hutchinson, of the Congregational order. He was ordained December 14, 1784, and dismissed January 8, 1795. He was succeeded by the Rev. Ignatius Thompson, who was ordained November 20, 1805, and dismissed April 26, 1811. Rev. John Dutton was ordained March 17, 1819, and has since been dismissed. Their present meeting house, situated in the centre of the township, was built in 1792. There are also, in this township, a considerable number of Methodists, Christians, Baptists, &c. The spotted fever prevailed here in 1811 and '12, and was very mortal among the young people and children. The surface of the township is considerably uneven, but the soil is generally good. There are to be seen here the traces of a hurricane, which formerly passed through the township from west to east. The timber was, probably, all laid prostrate through the distance of seven or eight miles, and about 100 rods in width, a new growth having evidently arisen, much younger than the neighboring forests, none of the trees appearing, from the number of concentric layers, to be more than 120 years of age. White river touches upon the northeast corner, and Quechee river touches upon the southeast corner. The other streams are small. There are in town 13 school districts, 1 grist, 4 saw and 1 fulling mill, 1 carding machine, 2 stores, 2 taverns and 2 tanneries. *Statistics of 1840.*—Horses, 396; cattle, 4,982; sheep, 14,526; swine, 1,449; wheat, bus. 4,435; barley, 85; oats, 15,786; rye, 1,352; buckwheat, 2,520; Indian corn, 11,021; potatoes, 65,135; hay, tons, 5,947; sugar, lbs. 39,261; wool, 32,683. Population, 1,774.

POTTIER'S POINT is situated on the west side of Shelburne, 2 miles, 182 rods from the south wharf in Burlington. It took its name from John Pottier, the first settler upon it. It is often called Shelburne Point.

POULTNEY, a post town in the western part of Rutland county, is in lat. 44° 32' and long. 3° 54', and is bounded north by Castleton, east by Middletown and Ira, south by Wells, and west by Hampton, N. Y. It lies 60 miles southwest from Montpelier, 13 from Rutland, and 46 north from Bennington. It was chartered September 21, 1761, and contains about 36 square miles. The first proprietor's meeting was held at Sheffield, Mass., June 7, 1763. The settlement was commenced in 1771, by Thomas Ashley and Ebenezer Allen. The early settlers were mostly emigrants from Connecticut and the western part of Massachusetts. Heber Allen was first town clerk, and Wm. Ward first representative. The religious denominations are Congregationalists, Baptists, Methodists and Episcopalians, each of which has a good meeting house. That of the Congregationalists was erected in 1803, that of the Baptists in 1805, that of the Methodists more recently, and that of the Episcopalians in 1831. Rev. Ithamer Hibbard was the first settled minister. He was settled over the Congregational church in 1780, and dismissed July 7, 1796. His successors have been Rev. James Thompson from May 18, 1803, to 1820; Rev. Ethan Smith from Nov. 21, 1821, to December, 1826; Rev. Sylvester Cochrane from Oct. 24, 1827, to Oct. 13, 1834, and Rev. Solomon Lyman, the present pastor, settled Feb. 25, 1835. This society has funds to the amount of \$5000. Elder Clark Kendrick was the first settled minister of the Baptist church. He was ordained in 1802, and died in March, 1824. Their present minister is the Rev. V. R. Hotchkiss. The Episcopal church, which bears the name of *St. John's Church*, consists of about 50 communicants. The Episcopal clergymen who have officiated here more or less are Rev. Bethuel Chittenden, Rev. Amos Pardee, Rev. Moore Bingham, Rev. Luman Foote and Rev. L. M. Purdy. Of the Methodist church we have no account. The epidemic in the spring of 1813, was very distressing, and in the course of three months was fatal to about 60 of the inhabitants. This township is watered by Poultney river and its numerous tributaries, which afford a number of valuable mill seats. The soil is generally warm and productive, and the surface pleasantly diversified with hills and vallies. Along Poultney river the alluvial flats are extensive and very productive. The timber is mostly deciduous, there being but few evergreens. A violent freshet, in July, 1811, swept off from the streams here four grist and four saw mills, one woollen factory, one card-

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ing machine, and several other buildings. There are two pleasant villages in Poultney, called East Poultney and West Poultney. *East Poultney* contains three houses for public worship, 3 stores, 1 grist and 2 saw mills, 1 iron foundry with machine shops, 10 or 12 mechanics, 1 tannery, 2 taverns, and about 60 dwelling houses. *West Poultney* contains a stone chapel, the Troy Conference Academy, a bank, 3 stores, 1 tavern, an extensive iron foundry, 52 dwelling houses and 312 inhabitants. The academy was projected at a meeting of the citizens, January 14, 1834; adopted by the Troy Conference of the Methodist Episcopal church September 3; chartered by the legislature of Vermont Oct. 25, and went into operation Sept. 1, 1836. The principal building is of brick, 112 feet by 36, with 4 principal stories, an attic and basement, and a rear 90 by 32 feet. The school is conducted by 4 male and 2 female teachers. (*See part second, pages 180 and 184.*) There are in town 15 school districts, 2 grain, 6 saw and several fulling mills, 5 stores, 4 taverns, and 3 tanneries. *Statistics of 1840.*—Horses, 363; cattle, 2,098; sheep, 13,696; swine, 1,013; wheat, bus. 1,613; barley, 38; oats, 10,748; rye, 3,894; buckwheat, 1,283; Indian corn, 22,082; potatoes, 28,724; hay, tons, 5,013; sugar, lbs. 10,765; wool, 34,946. Population, 1,880.

POULTNEY RIVER, rises in Tinmouth and runs a westerly course through Middletown and Poultney. On arriving at the west line of Poultney, it begins to form the boundary between Vermont and New-York, and, running between Fair-Haven and West-Haven, on the north, and Hampton, N. Y., on the south, falls into the head of East bay, which is an arm of lake Champlain. From Fair-Haven it receives Castleton river, and from West-Haven, Hubbardton river. The whole length of Poultney river is about 25 miles, and it affords a number of excellent mill seats. 'A remarkable change took place in this stream, in 1783. A little above its junction with East bay, a ridge of land crosses in a northerly direction. The river running a northwesterly course, on meeting the ridge, turned suddenly towards the northeast, and, after keeping that course about half a mile, turned westerly, rushing down a steep ledge of rocks, and forming a number of fine mill privileges. The river had, for some years, been observed to be making encroachments upon the ridge at the place, where it turned to the northeast; and in May, 1783, during a violent freshet, the river broke through the ridge, and, meeting with no rocks, it cut a channel

100 feet deep lowering the bed of the river for some distance above, and carrying immense quantities of earth into East bay. The bay, which was before navigable for vessels of 40 tons burden, was so completely filled, for several miles, that a canoe could with difficulty pass at low water, and the navigation was much obstructed at Fiddler's Elbow, a narrow place in the lake near South bay. The obstructions have since been mostly removed by the force of the current. A company was incorporated for the purpose of improving the navigation of these waters.'

POWNA, a post town in the southwest corner of Bennington county and southwest corner of the state, is in lat. 42° 47' and long. 3° 54' and is bounded north by Bennington, east by Stamford, south by Williamstown, Mass., and west by Hoosic, N. Y. It lies 56 miles southwesterly from Rutland and 30 west from Brattleboro'. It was chartered Jan. 8, 1760, and contains about 25,000 acres. The settlement of this township, under the New Hampshire charter, was commenced in the spring of 1762, there being at that time 4 or 5 Dutch families within the limits of the township, claiming under the "Hoosic Patent," granted by the government of New York. Among the early settlers of the town were the families of Wright, Gardner, Morgan, Dunham, Noble, Card, Curtis, Watson, and Seelye, but the precise time when they severally came into the town is not ascertained. In 1791 it was the third in Bennington county, and the fifth in the state, in point of population, containing at that time 1,746 inhabitants. The religious denominations are Baptists, Methodists, and Protestant Methodists. The surface of the township is considerably uneven, but the soil is generally good, and produces plentiful crops. It is well adapted to the production of grain and grass, and here are kept some of the finest dairies in the state. The principal stream is Hoosic river, which is formed here and passes off in a northwesterly direction into the township of Hoosic, N. Y. Along this stream are some rich and beautiful tracts of intervalle, and on it are several valuable stands for mills. Some of the head branches of Walloomscoik river rise in the northeastern part of this township, and pass off into Bennington. The town is divided into 13 school districts, and contains a meeting-house, situated near the centre, 2 stores, 2 taverns, 2 grist and 5 saw mills, mechanics' shops, &c. *Statistics of 1840.*—Horses, 313; cattle, 1,468; sheep, 9,540; swine, 1,169; wheat, bus. 1,075; barley, 150; oats, 20,891; rye, 4,057; buck-

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wheat, 1,072; Ind. corn, 11,147; potatoes, 28,215; hay, tons, 3,164; sugar, lbs. 6,087; wool, 22,367. Population, 1,613.

PUTNEY, a post town in the eastern part of Windham county, is in lat. 42° 59' and long. 4° 28', and is bounded north by Westminster, east by Connecticut river, which separates it from Westmoreland, N. H., south by Dummerston, and west by Brookline. It lies 10 miles north from Massachusetts line, and 33 south from Windsor. It was chartered by N. Hampshire Dec. 26, 1753, to Col. Josiah Willard, and rechartered by New York Nov. 6, 1766, and now contains 18,115 acres. A settlement was commenced and a fort built on the "Great Meadow," so called, in the eastern part of the town, a little previous to the breaking out of the French war in 1744; but on the commencement of hostilities, the fort was evacuated, and the inhabitants, together with those from adjacent towns, retired to Northfield, Ms., which was the frontier post during that war. One circumstance took place, however, previous to the breaking up of the fort, which undoubtedly hastened that event, which was as follows:—A man by the name of William Phipps was hoeing corn on the 5th of July, 1745, near the southwest corner of the meadow, when two Indians sprang upon him, and dragged him into the woods near by. Here, after a short parley, one of the Indians departed, leaving the prisoner under the care of his comrade. Phipps, with the hardihood characteristic of the pioneers in these wilds, watching an opportunity, struck his keeper down with his hoe, and seizing his gun, gave the other, who was returning, a fatal wound. Thus at liberty again, he sought refuge in the fort; but, unfortunately, before he reached it, he fell in with three other Indians, who butchered the brave fellow in cold blood. Five days after this event the Indians made an attack upon Upper Ashuelot, (Keene, N. H.) and killed and scalped Josiah Fisher. Shortly after, Nehemiah Howe, as he was cutting timber on the "Meadow," was captured by the Indians and carried to Canada, where he died. In 1754 the first permanent settlement was made in town, by John Perry, Philip Alexander, and Michael Gilson, emigrants from Massachusetts. They located themselves on the Great meadow, as their predecessors had done, and in the year following, 1755, in company with others lately arrived, built a fort on the site of the house now occupied by Col. Thomas White. (This fort was 120 feet long by 80 wide, and was built of yellow pine timber, hewed six inches thick and laid up

about 16 feet high,—the houses were built against the wall, with a roof slanting up, (called a salt-box roof,) to the top of the wall, the wall of the fort making the back wall of the house, and the houses all fronting the hollow square in the centre of the fort. It was garrisoned by troops from New Hampshire until about 1760.) The first settlement on Sackett's brook, or what is now called Putney street, was made by Joshua Parker, in 1764. The town was organized, and the first town officers chosen, May 8, 1770. Noah Sabin was first town clerk. The religious denominations are Congregationalists, Baptists, Methodists, and Universalists. The Congregational church was organized Oct. 17, 1776, at which time they settled the Rev. Josiah Goodhue, who died Nov. 14, 1797. His successors have been Rev. Jairus Remington, from Feb. 12, 1800, to Feb. 15, 1803; Rev. Elisha D. Andrews, from June 25, 1807, to May 27, 1829; Rev. B. H. Pitman, March 3, 1830, to Nov. 1, 1832. Rev. Amos Foster, the present minister, was settled Feb. 13, 1833. Their first meeting house was built in 1773; their present house in 1808. The Baptist church was organized in 1786. The ministers have been the Rev. Messrs. Jonathan Wilson, Lewis Allen, Ziba Howard, and Ferris Moore. Their present meeting house was built in 1839. The Methodist church was organized in July, 1828. The ministers have been the Rev. Messrs. Justin Spalding, Jona. Hazeltine, C. D. Cahoon, and John S. Smith. Meeting house built in 1832. The Universalist society was formed in 1833. The town has generally been healthy. The dysentery prevailed here in 1775, and the epidemic of 1813 was very mortal. There were 38 deaths by the latter between the 9th of Jan. and the 13th of April. On the 19th of August, 1788, a violent tempest prostrated a great part of the forest trees here. In 1770 the town was overrun by immense swarms of worms, which, like the swarms of Egypt, ate up every green thing; also to a limited extent in 1823 and 4. The bottom lands on the river and Sacket's brook, in this town, are rich alluvial tracts, and amply repay the toil of the husbandman by their abundant crops. The "great meadow," with its waving fields of corn and luxuriant vegetation, on a summer day affords a treat to the lover of nature rarely equalled. The uplands are mostly of a rich, strong soil, and well adapted to grazing and the production of the hardier kinds of grain. The lowest meadow lands, when the country was new, were covered with a tangled growth of butternut, elm, soft maple, and

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yellow pine. The higher flats abounded with the white pine, of a majestic kind. This glory of the American forest has, however, nearly disappeared, there being only here and there a solitary tree raising its head to the heavens, and standing as an emblem of the few early settlers that remain amongst us. The other forest trees are oak, maple, beech, birch, walnut, ash, &c. The rock formations on the east side of Sackett's brook are mostly mica slate, abounding with garnets and staurolite. Through the centre of the town run the extensive strata of argillite or roof slate, that extend from Massachusetts line far into Vermont. West of this range comes the mica slate again, interspersed with a hard black limestone. In the east part of the town is found a very rare mineral, known by the name of fluete of lime or fluor spar, of a beautiful emerald green color. This is the only locality in the United States where this mineral, of an emerald green, is found. Specimens of it have been sent to the most distinguished mineralogists in this country and Europe. Serpentine of a beautiful shade, and susceptible of a high polish, is found here also. The village of Putney is about one mile from Connecticut river, and is built on both sides of Sackett's brook. The location is pleasant, in the bosom of a beautiful valley, and sheltered on each side, except towards the east, from the bleak winds of our climate, by forest-crowned hills. Sackett's brook, a never failing stream, affords many valuable mill privileges, and its waters are employed in the short space of 100 rods to keep in operation one large factory, 2 paper mills, 2 fulling mills, a bark mill, a trip hammer, a machine shop, a saw mill, and a grist mill, affording occupation to a large number of hands. The factory above spoken of is 80 feet long by 32 wide, 4 stories in height, with two sets of machinery, which turn off annually 33,000 yds. of cassimeres, valued at \$40,000. Beside the buildings enumerated above, there are in the village 1 smaller woollen factory, 1 grist mill, 1 saw mill, 3 stores, 2 taverns, and about 20 mechanics' shops, besides dwelling houses. Number of school districts in town, 13. *Statistics of 1840.*—Horses, 262; cattle, 1,778; sheep, 6,956; swine, 985; wheat, bus. 993; barley, 130; oats, 18,400; rye, 2,274; buckwheat, 325; Ind. corn, 12,225; potatoes, 26,390; hay, tons, 2,849; sugar, lbs. 8,830; wool, 13,730. Population, 1,382.

QUECHEE RIVER. *See Otta-Quechee river.*

QUECHEE VILLAGE. *See Hartford.*

RANDOLPH, a post town in the western part of Orange county, is in lat. 43° 56'

and long. 4° 25', and is bounded north by Brookfield, east by Tunbridge, south by Bethel, and west by Braintree. It lies 23 miles south from Montpelier, and 34 north-west from Windsor. It was granted Nov. 2, 1780, and chartered to Aaron Storrs and others, June 29, 1781, containing 28,596 acres. A company, consisting of 20 persons, was formed at Hanover, N. H., then called Dresden, in May, 1778, for the purpose of purchasing this township, known to them by the name of Middlesex. At the first meeting of this company the Hon. Joseph Marsh was chosen moderator and agent to prefer a petition to the legislature for a charter; Capt. Aaron Storrs was chosen clerk, and Capt. Abel Marsh to ascertain whether there were any claimants of the land in New-York, or elsewhere. The settlement was commenced here three or four years before the township was chartered. As near as can be ascertained William Evans and family, Edward Evans, John Parks and Experience Davis, were the first persons who wintered in the township. Mr. Zaddock Steele was taken from this township by the Indians and carried into captivity, on the 17th of October, 1780, the day after the burning of Royalton. Randolph Parmelee was the first child born in this township. The town was organized March 31, 1783, and Jehiel Woodward was first town clerk. The religious denominations are, Congregationalists, Methodists, Freewill Baptists, Universalists, Christians, Episcopalians, and some Baptists. The Rev. Elijah Brainard was ordained over the Congregational church and society, September 6, 1786, and dismissed January 4, 1798. The Rev. Tilton Eastman was settled June 3, 1801, and dismissed in May, 1830; the Rev. Moses Kimball was settled from January 7, 1832, to November, 1833; and Rev. E. J. Boardman, from July, 1834, to March 8, 1842. This society erected a new and elegant meeting house in 1838, on the site of the old one, built at the centre in 1792. An Episcopal church by the name of *Grace Church* was organized here in 1834, but it is small and destitute of regular services. The town has generally been very healthy. There were a few cases of the spotted fever in 1811, and the dysentery was very distressing here in the autumn of 1823. This township is watered by the second and third branch of White river, the former running through the eastern and the latter through the western part of the township. These streams and their tributaries afford a number of advantageous situations for mills. The timber is, principally, maple, beech, and

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birch, with some hemlock and spruce. The surface of the township is considerably elevated, but is less broken than that of the towns generally in this vicinity. The soil is productive and the farming interest extensive. There are here three pleasant villages, one in the centre of the township, another in the eastern, and the other in the western part. The *Centre village* is very handsomely situated on elevated ground, and contains 2 handsome meeting houses, an academy school house, a post office, 2 attorneys' offices, 2 stores, 1 tavern, and a number of handsome dwelling houses. The Hon. Dudley Chase, many years speaker of the House of Representatives, afterwards judge of the supreme court, and subsequently senator in Congress, resides here. The union meeting house in this village, erected in 1837, is occupied principally by the Universalists and Methodists. The principal preachers have been Rev. Wm. S. Ballou, Universalist, and Rev. S. P. Williams, Methodist. Randolph Academy, or Orange County Grammar School, was established here Nov. 8, 1806, and the building erected in 1807. This institution is well furnished with apparatus, and the literary society connected with it has a library of 300 vols., for the use and benefit of the scholars. This academy has been, for the most part, deservedly popular. The following is a list of the preceptors:

William Nutting,	from 1807 to 1813.
D. Brook,	from 1813 to 1814.
Rufus Nutting,	from 1814 to 1818.
George Bush,	from 1818 to 1819.
Samuel A. Worcester,	from 1819 to 1820.
Joseph Sawyer,	from 1820 to 1821.
Rufus Nutting,	from 1821 to 1828.
Clement Long,	from 1828 to 1831.
John Fairchild,	from 1831 to 1832.
T. G. Brainard,	from 1832 to 1836.
Samuel A. Benton,	from 1836 to 1838.
Azariah Hyde,	from 1838 to 1841.
Edward Cleveland,	from 1841 to —.

Randolph *East village* is situated on the 2d branch of White river, is compactly built and a place of considerable business. It contains a meeting house built in 1839, and owned principally by the Universalists, 3 stores, 1 tavern, a post office, an attorney's office, and mills of various kinds. The "Infirmity and Insane Hospital" of Dr. Jehiel Smith is in this village. Randolph *West village* contains a meeting house, 2 stores, 1 tavern, a post office, an attorney's office, and mills, and other machinery. The meeting house is occupied principally by the Congregationalists and Christians, the minister of the former being Rev. John Vinton, and Rev. Mr. Marsh of the latter. There are in town 4 attorneys, 7 physicians, 22 school districts, with school houses, 1 oil, 5 grist,

and 9 saw mills, 8 stores, 4 taverns, five tanneries, two furnaces, two starch factories, clothiers' works, and carding machines, &c. *Statistics of 1840.*—Horses, 589; cattle, 2,233; sheep, 17,792; swine, 2,620; wheat, bus. 5,525; barley, 104; oats, 32,105; rye, 3,406; b'kwheat, 7,287; Ind. corn, 18,499. potatoes, 112,598; hay, tons, 8,831; sugar, lbs. 34,660; wool, 40,782. Population, 2,678.

RANDOM.—Name altered to Brighton November 3, 1832. See Brighton.

READING, a post town in the central part of Windsor county, is in lat. 43° 30' and long. 4° 26', and bounded north by Woodstock, east by Windsor, south by Cavendish, and west by Plymouth. It is 53 miles south from Montpelier, and was chartered to Israel Stowell, Jonathan Hammond and others, July 6, 1781, and contains 23,040 acres. The settlement of the township was commenced about the year 1772, by Andrew Spear, who removed his family here from Walpole, N. H. This was for several years the only family in town. About the year 1778, John Weld, Esq. moved his family from Pomfret, Conn., and several young men from that and the other New England states, began improvements in the south and eastern parts of the township. Most of the early settlers were in low circumstances as to property, and, like the settlers of other new townships, they had to endure privations and hardships. The town was organized March 30, 1780, and Jedediah Leavens was the first town clerk. It was represented the same year by Thos. Hapgood. Col. Tyler, of Claremont, N. H., built a saw mill here in 1780, and the first grist mill in 1783. Capt. David Burnham opened the first tavern in 1786. On the 23d of November, 1787, the Rev. Nahum Sergeant was ordained to the pastoral care of the Congregational church in Reading, with a permanent salary for life. A log meeting house was erected about the same time. The church, however, were not long blest with his labors; for in visiting his friends in Chelsea, Mass. he was disposed to have the small pox by inoculation, of which he died on the 7th of October, A. D., 1792. No other minister was permanently settled here until the 22d of February, 1819, when the Rev. Moses Elliott was ordained to the pastoral care of the same church; but continued here only about a year. There are at present, several religious denominations in Reading, viz. Congregationalists, Baptists, Methodists, Christians, and Universalists. The Rev. Samuel C. Loveland, minister of the Universalists, resides here; and the Revds. Jonathan Jones

READING.

READSBOROUGH.

RICHFORD.

and Elijah Gale are ministers of the Methodist church. A meeting house was erected here in 1801, and partly finished; it was, however, destroyed by fire on the night of the 4th of July, 1810; supposed to be the work of an incendiary. In 1816, an elegant brick meeting house was erected here, and completely finished the same year. The most remarkable season of mortality ever experienced here, was in February and March, 1813, when more than sixty persons died in two months, mostly of the spotted fever. The surface of this town is uneven, and the elevations pretty abrupt. Towards the west part, is an elevated tract of land extending through the town from north to south, from which issues its principal streams. It is worthy of remark that no water runs into this township. In the southwest part, and on the line between Reading and Plymouth, is a natural pond, about two hundred rods in length, and fifty in breadth. The outlet of this pond is to the south, and leads into Plymouth pond. From the northwest part of the town, the streams take a northerly direction, and fall into Quechee river at Bridgewater. From the middle and northeast parts, the streams take an easterly direction, and unite with Connecticut river at Windsor, whilst those in the southeast part take a southeasterly direction and fall into Black river at Weathersfield. Some small streams, however, rise in the north part, and taking a northeasterly direction, fall into Quechee river at Woodstock North village. The streams in Reading, though generally small, afford a tolerable supply of water for common mills. The soil in Reading is of a middling quality, and affords excellent pasturage. The timber is generally hard wood, but the highlands afford spruce and hemlock. There are three villages and post offices in the town. *Reading*, near the centre, contains the meeting house, 'Bailey's mills,' a store, tavern, &c. *South Reading*, in the southern part, has 2 stores, a tavern, and the extensive copperplate printing establishment of Mr. Lewis Robinson. *Felchville*, a new village in the southeast part, contains a woollen factory, 2 stores, a tavern, &c. There are in the town 15 schools, 2 grist and 7 saw mills, 2 woollen factories, 5 clothiers' works, 5 stores, 3 taverns, and 2 tanneries. *Statistics of 1840.*—Horses, 424; cattle, 1,879; sheep, 8,983; swine, 596; wheat, bus. 2,950; barley, 478; oats, 6,339; rye, 601; buck-wheat, 405; Indian corn, 3,984; potatoes, 22,540; hay, tons, 4,177; sugar, lbs. 24,215; wool, 18,379. Population, 1,363.

READSBOROUGH, a township in the

southeast corner of Bennington county, is in lat. 42° 48' and long. 4° 6', and is bounded north by Searsburgh, east by Whitingham, south by Rowe, Mass., and west by Stamford and a part of Woodford. It lies 12 miles southeast from Bennington, and 18 southwest from Brattleborough. This township contains 20,480 acres, but the time and the source of the grant are not known. Its population, in 1791, amounted to 64 persons. The surface is considerably mountainous, and much of it unsuitable for settlement. The streams are Deerfield river, which runs along the eastern Boundary into Massachusetts, and a branch of this river, which runs diagonally through the township from northwest to southeast. These streams afford several mill privileges. The turnpike, from Bennington to Brattleborough, passes through the north part. There are here 4 schools, 4 saw and 1 grist mill. *Statistics of 1840.*—Horses, 424; cattle, 1,132; sheep, 2,679; swine, 508; wheat, bus. 249; barley, 178; oats, 4,050; rye, 386; buck-wheat, 752; Indian corn, 972; potatoes, 20,952; hay, tons, 2,146; sugar, lbs. 27,217; wool, 5,376. Population, 767.

RICHFORD, a post town in the northeast corner of Franklin county, is in lat. 44° 57' and long. 4° 24', and is bounded north by Sutton, Can., east by Jay, south by Montgomery, and west by Berkshire. It lies 50 miles north from Montpelier, and 24 northeast from St. Albans. It was granted March 13, 1780, and chartered to Jonathan Wells and others, August 21, of the same year, containing 23,040 acres. The settlement was commenced in 1797. The town was organized March 30, 1799. Chester Wells was first town clerk and Jonathan Jones first representative. There are two Baptist societies, the first organized in 1810, the second in 1827, and a Methodist society organized in 1839. Elder Wm. Rogers is minister of the 1st Baptist society. The others have no settled ministers. The eastern part of the township is high and broken. The southeast corner extends on to Jay Peak. The principal stream is Missisco river, which enters the township from Canada near the northeast corner, and runs through it in a southwesterly direction into Berkshire. Along the river is some fine intervalle. There are here no meeting houses, 7 school districts and school houses, 2 stores, 2 starch factories, and several mechanics' shops. *Statistics of 1840.*—Horses, 202; cattle, 930; sheep, 2,263; swine, 379; wheat, bush. 2,233; barley, 2; oats, 2,272; buckwheat, 734; Ind. corn, 2,112; potatoes, 39,706; hay,

RICHMOND.

tons, 2,236; sugar, lbs. 19,505; wool, 5,-168. Population, 914.

RICHMOND, a post town in the central part of Chittenden county, is in lat. $44^{\circ} 24'$ and long. $4^{\circ} 4'$ and is bounded northerly by Jericho, easterly by Bolton, southerly by Huntington, and westerly by Williston. It lies 13 miles southeast from Burlington, and 24 northwest from Montpelier. This township was taken from the townships of Huntington, Williston, Bolton, and Jericho, and was incorporated by act of the Legislature, passed in October, 1794. The town was organized in March, 1795, and Joshua Chamberlain was first town clerk. Amos Brownson, Esq. was the first representative, chosen the same year. Joel Brownson and James Farnsworth were the first justices of the peace. The first attempt to form a settlement here was made in 1775, by Amos Brownson and John Chamberlain, with their families; but they abandoned the township in the fall, and did not return till the close of the revolutionary war. In the spring of 1784 they returned to the farms, on which they had made beginnings, accompanied by Asa and Joel Brownson, Samuel and Joshua Chamberlain, James Holly, Joseph Wilson, and Jesse McFairlain. The religious denominations are the Congregationalist, Baptist, Freewill Baptist, and Universalist. Elder Ezra Wilmot was ordained over the Baptist church, and continued several years. He was the first settled minister, and there was no other in town till September 25, 1823, when Elder John Peck was settled over the same church. There is a meeting house in the centre of the town having 16 sides, with a steeple rising from the centre, and owned by the several denominations. Around the meeting house is a small village, and another small village has recently grown up on the opposite side of the river, upon the stage road leading from Burlington to Montpelier. It contains a store, tavern, and several mechanics. Mr. Bigford Spooner died here in 1819, aged 104. Dr. Matthew Cole was the first physician. He died in 1809, and his brother, Dr. Seth Cole, has been the principal physician since that time. The township is watered by Winooski river, which runs through it in a westerly direction, and by Huntington river, which enters the township about the middle of the southern boundary, and unites with the Winooski river east of the centre. There are also several smaller streams, on which mills are erected. Along Winooski river the alluvial flats are extensive and beautiful. This township forms a very convenient centre, in which

RIPTON.

the meeting house is situated. The stage road from Montpelier to Burlington passes along the north bank of Winooski river. The town is divided into 8 school districts, and contains three saw and one fulling mill, 2 tanneries, 2 taverns, 3 stores, and 1 woollen factory. *Statistics of 1840.*—Horses, 281; cattle, 2,211; sheep, 5,543; swine, 1,371; wheat, bus. 1,941; oats, 13,049; rye, 1,177; buckwheat, 549; Ind. corn, 7,864; potatoes, 38,115; hay, tons, 3,767; sugar, lbs. 11,650; wool, 11,717. Population, 1,054.

RIPTON, a post town in Addison county, is in lat. $44^{\circ} 1'$, and is bounded north by Avery's gore, and Bristol, east by Granville, south by Goshen, and west by Middlebury. It lies 26 miles southwest from Montpelier; was granted April 13, 1781, and chartered to Abel Thompson and associates. Middlebury river runs through the south part, and on this stream are 5 saw mills in Ripton. The turnpike from Royalton to Vergennes passes along the bank of this stream. In 1814 a strip from the east side of Middlebury was annexed to this township, and in 1815 the north part of Goshen was annexed to it. Much of the township is mountainous and broken, and unsuitable for settlement. *Statistics of 1840.*—Horses, 86; cattle, 260; sheep, 634; swine, 126; wheat, bus. 170; oats, 1,420; rye, 190; buckwheat, 15; Indian corn, 120; potatoes, 9,360; hay, tons, 690; sugar, lbs. 4,200; wool, 1,796. Population, 357.

ROCHESTER, a post town in the northwest corner of Windsor county, is in lat. $43^{\circ} 53'$ and long. $4^{\circ} 15'$, and is bounded northerly by Braintree and a small part of Kingston, easterly by Bethel, southerly by Pittsfield, and westerly by Hancock. It lies 30 miles southwest from Montpelier, and 20 southeast from Middlebury. It was granted November 6, 1780, and chartered to Hon. Dudley Chase and others, August 30, 1781, containing 23,040 acres. The settlement of this township was commenced about the close of the revolutionary war. In the fall of 1822, the dysentery prevailed here to an alarming degree, particularly in the village. There were about 40 deaths in the township in the period of two months. The religious denominations are Congregationalists, Methodists, Universalists and Baptists. Rev. Salmon Hurlbut was settled over the Congregational church in 1822. Rev. William Scales is the present minister. They have a meeting house which was erected in 1813. Rev. Lewis Hill is minister of the Methodist church. The two oldest persons in this township, in 1824, were Eliakim Root and Seth

ROCHESTER.

ROCKINGHAM.

ROCKINGHAM.

Briggs, both between 96 and 98 years of age. The principal stream is White river, which runs through the township from north to south. About half a mile south of the centre it receives a considerable tributary from the west, which originates in Goshen. On each of these streams are good situations for mills. The township is mountainous and broken, but contains much good land. The intervalle along the river is handsome, but ~~not~~ extensive. The timber is mostly hard wood, interspersed with some spruce, hemlock, &c. There is a small but pleasant village situated near the centre of the township on the eastern bank of White river, containing a meeting house, and it is a place of some business. There are in town 13 school districts, 1 grist, 7 saw and 2 fulling mills, 3 stores, 2 taverns and 1 tannery. *Statistics of 1840.*—Horses, 287; cattle, 1,609; sheep, 11,646; swine, 678; wheat, bus. 2,367; barley, 155; oats, 10,552; rye, 639; buckwheat, 1,559; Indian corn, 4,446; potatoes, 44,945; hay, tons, 5,250; sugar, lbs. 39,110; wool, 29,980. Population, 1,396.

Rock Dunder. *See Dunder Rock.*

Rock River rises in Franklin, and runs through Highgate into Missisco bay.

Rockingham, a post town in the north-east corner of Windham county, is in lat. 43° 11' and long. 4° 32', and is bounded north by Springfield, east by Connecticut river, which separates it from Charlestown, N. H., south by Westminster, and west by Grafton. It lies 85 miles from Montpelier, 22 from Windsor and 25 from Brattleborough, as the roads are travelled. It was chartered December 28, 1752, containing 24,955 acres. The settlement of the township was commenced in 1753, by Moses Wright, Joel Bigelow and Simeon Knight, who emigrated from Massachusetts. The town was organized about the year 1760. The first town clerk was Joshua Webb, and he and John Roundy were the first representatives. But little is known of the early history of this town. The attention of the first settlers was principally directed to fishing for salmon and shad, which were then taken in great abundance at Bellows' falls. For this reason, agriculture was, for many years, much neglected, and the settlement advanced very slowly. The religious denominations are Congregationalists, Episcopalians, Methodists, Baptists, &c. The Congregational church was organized about 1770. Rev. Samuel Whiting was settled over it from Oct. 27, 1773, to May 18, 1809, the Rev. Elijah Wallage from 1818 to 1821, and the Rev. Samuel Mason from Jan. 5, 1837 to August 22, 1838. A

Congregational church was formed at Saxton's River village in 1836, over which the Rev. Nelson Barbour was settled from Nov. 13, 1836 to Sept. 11, 1839; the Rev. Samuel A. Benton, the present minister, was settled Jan. 15, 1840. The Episcopal church, by the name of *Immanuel Church*, was formed at Bellows Falls, as early as 1798. The first articles of association were signed by 17 persons. For several years the society held only occasional meetings for public worship, availing itself of the services of passing clergymen. For many years it received the income, \$70 *per annum*, of the glebe grant in town, which was usually appropriated for the ministerial services of the Rev. Daniel Barber, but sometimes of other clergymen, as the Rev. Messrs. Ogden, Chittenden and Bronson. Two acres of land being given as a site for a church and burying ground in Bellows Falls village, a church was built and consecrated Sept. 24, 1817. Rev. Carlton Chase, D. D., the present minister, became rector of this church Sept. 19, 1819, the Rev. Geo. T. Chapman having officiated between 1 and 2 years previous. About 1821, a course of prosperity in spiritual and temporal things began, which, by Divine favor, has not ceased. In 1826, the rector commenced a course of "Bible class" and catechetical instruction, which is still continued with a manifest blessing. The progress of the church in numbers and piety has been firm and constant. Communicants in 1831, 45; in 1837, 80; in 1842, 116. Baptisms, 315. Confirmed by Bishop Griswold, 46; by Bishop Hopkins, 101. Marriages, 56. Deaths, 81,—in 22 years. Connecticut river washes the eastern border of this township. Williams' river runs through the central part and unites with the Connecticut about three miles north of Bellows Falls. Saxton's river runs through the south part and falls into the Connecticut a mile south of Bellows Falls, in the northeast corner of Westminster. These streams afford a great number of valuable sites for mills. The surface of this township is somewhat broken, but the soil is in general warm and productive. *Bellows' falls* are in Connecticut river, near the southeast corner of this township. The breadth of the river above the falls is from 16 to 22 rods. At the falls a large rock divides the stream into two channels, each about 90 feet wide. When the water is low the eastern appears crossed by a bar of solid rock, and the whole river flows into the western channel, where it is contracted to the breadth of 16 feet, and flows with astonishing rapidity. There are sev-

ROCKINGHAM.

ROXBURY.

eral pitches, one above another, for the distance of half a mile, the largest of which is that where the rock divides the stream. Notwithstanding the velocity of the current, the salmon formerly passed up this fall, and were taken many miles above; but the shad were never taken above here. In 1785, Col. Enoch Hale erected a bridge over the Connecticut at these falls. Its length was 365 feet, and it was supported in the middle by the great rock mentioned above. Till 1796 this was the only bridge across the Connecticut. The bridge here is about 50 feet from the water, and from it the traveller has an interesting and sublime view of the falls. The whole descent of the river at these falls is 42 feet. They are passed by a canal, on the Rockingham side, consisting of nine locks and are half a mile in length. Around these falls is an interesting locality of minerals. The rocks are principally gneiss. There are also the following rare minerals, viz: tremolite; prehnite, radiated in small nodules of a greenish white color; fibrolite, abundant in granite; fluat of lime a few rods below the bridge, in gneiss, and, also, one mile northwest from the falls in quartz, crystalized, massive and of a green color; cyanite, or sappare; green carbonate of copper in small quantities; macle and indicolite. Besides the above, there are in the township aluminous and argillaceous slate, the latter of which is used for building and gravestones; chlorite; hornblende; limpid and radiated quartz; bitter spar; jasper; schorl; garnets; zoisite; augite, and sulphuret of iron. There are in this township several pleasant villages. *Bellows Falls village*, situated on the bank of the Connecticut at Bellows falls, in the southeastern part of the township, is the most important. It contains two churches, a bank, a post office, a number of elegant private dwelling houses, several stores, an extensive paper manufactory, and a variety of mills, machinery, and mechanic's shops. *Rockingham village* is situated near the centre of the township, and contains a meeting house and several handsome dwelling houses. *Saxton's river village* is situated on the stream of that name in the south part of Rockingham, and is very pleasant and flourishing. It contains 2 meeting houses, a post office, mills of various kinds, several stores, mechanic's shops, &c. The village of *Cambridge Port*, in the southwest corner of the township, contains a meeting house, woollen factory, a tavern, 2 stores, an attorney, and a physician. There are in town 17 primary schools, 4 meeting houses, 12 stores, 7 fulling mills, 4 wool-

len factories, 5 grist and 7 saw mills, and 2 tanneries. *Statistics of 1840.*—Horses, 389; cattle, 1,950; sheep, 15,225; swine, 1,421; wheat, bus. 1,618; barley, 145; oats, 21,424; rye, 4,647; buckwheat, 2,525; Indian corn, 15,992; potatoes, 41,581; hay, tons, 4,259; sugar, lbs. 14,725; wool, 32,371. Population, 2,330.

ROXBURY, a post town in the south part of Washington county, is in lat. 44° 4' and long. 4° 18', and is bounded north by Northfield, east by Brookfield, south by Braintree and Granville, and west by Warren. It lies 15 miles southwesterly from Montpelier and 45 northwest from Windsor. It was granted November 6, 1780, and chartered to Hon. Benjamin Emmonds and others, August 6, 1781, containing 23,040 acres. The settlement of this township was commenced in 1789 by Christopher Huntington. He was originally from Mansfield, Conn., but resided a while in Norwich in this state, previous to his moving into this township. He, like many other settlers of new townships, had to draw his effects several miles upon a hand-sled, and had many hardships to encounter. The town was organized in 1796. Thomas Huntington was first town clerk and Zebadiah Butler first representative. The religious denominations are Freewill Baptists, Congregationalists, Methodists, Baptists and Universalists. They have each a regular church, but are all dependent upon missionaries or other itinerant preachers. A union house for public worship was finished in 1839. The dysentery was very mortal here in the autumn of 1823, particularly in the northeastern part. This township is situated on the height of land between Winoski and White rivers, and has consequently no large streams. The waters in the north part flow through Dog river into Winoski river, and those in the south part through Ayres' brook, and the third branch into White river. The surface of the township is uneven, but the soil is well adapted to the production of grass, and in general yields good crops of grain. The timber is mostly hard wood, with some hemlock, spruce and fir. The rocks in the eastern part are argillaceous slate, and abound with cubical crystals of the sulphuret of iron. Iron ore is found in the southeastern part. There is a very small village in the northeast corner, on a principal branch of Dog river, containing a grist, saw, fulling and clover mill, tavern, &c. There are in town 11 school districts, 1 store, 3 taverns, 1 carriage shop, 1 grist, 1 clover and 3 saw mills. *Statistics of 1840.*—Horses, 172; cattle, 794; sheep, 3,646; swine, 496;

ROYALTON.

ROYALTON.

wheat, bus. 2,695; barley, 477; oats, 5,608; rye, 294; buckwheat, 1,952; Indian corn, 1,221; potatoes, 25,855; hay, tons, 2,055; sugar, lbs. 16,198; wool, 9,061. Population, 784.

ROYALTON, a post town in the north part of Windsor county, is in lat. 43° 49' and long. 4° 28', and is bounded north by Tunbridge, east by Sharon, south by Barnard and west by Bethel. It lies 31 miles south from Montpelier and 25 northwest from Windsor. This township was originally granted by New York to George Bangor, Wm. Smith, Whitehead Hicks, and John Kelly, and was by them surveyed and allotted in 1770. The first permanent settlement was made in 1771, by Mr. Robert Havens, who this year moved his family into the town. The next year he was joined in the settlement by Mr. Elisha Kent and family, and the inhabitants were so much increased in the course of a few years, that the town was organized. Comfort Seaver was the first town clerk. It was represented in 1778 by Joseph Parkhurst, at which time there were about 50 freemen. It was not again represented till 1781, the town having taken exception to the proceedings of the legislature in relation to a union with a part of New Hampshire. It being ascertained by the inhabitants, who had all purchased under the New York charter, that the legislature of Vermont was about to treat this township as vacant land, and grant it to Eliakim Spooner and others, the settlers applied, and obtained a grant of the same, and the township was rechartered to Comfort Seaver, Esq., and associates, Dec. 20, 1781. In 1780 the settlement here consisted of about 300 persons, and was in a very thriving state. They had hardly secured the harvest of that year, when they received a hostile visit from the Indians, and the settlement was laid in ashes.* In 1781, the inhabitants having mostly returned, the town was again represented in the General Assembly, by Mr. Elias Stevens, and this year the township was rechartered as already related. The most numerous religious society in this town is the Congregational. There is, however, a respectable number of Methodists, and some Baptists and Episcopalians. The Rev. John Searle was the first settled minister. He was ordained over the Congregational church in 1783, and died in 1787, or 88. In 1789 the Rev. Azel Washburn was ordained in his place, and dismissed in 1792. Rev. Martin Tuller was ordained in 1794, and died in 1813. Rev. Ebenezer Halping was ordained in 1818,

and dismissed in 1822. Rev. Joseph Torrey was settled from August, 1824, to 1827. The present minister is the Rev. C. B. Drake. Their meeting house built in 1792, has recently been taken down, and another, in modern style, erected in its place. An Episcopal society, by the name of *St. Paul's church*, was formed here Oct. 12, 1835, and received its present organization May 4, 1836. A small church was soon after erected, and consecrated by Bp. Hopkins Nov. 3, 1837. It has had the services, a part of the time, of the Rev. Messrs. Parker, Sabine, and Potter, successively up to March, 1838, when the Rev. N. Sprague, the present minister, took charge of it. Communicants, about 30. Of the Methodist church, who also have a chapel in the village, we have no particulars. The surface of the township is somewhat broken and hilly, but the soil is good, particularly along White river and its branches, where it is of a superior quality. White river runs through the township in an easterly direction, and receives here its first and second branches, which are the only streams of much consequence. *Royalton village* is pleasantly situated on the bank of White river, about half way between the mouths of the first and second branches, and near the centre of the township. It contains three meeting houses, an academy, 4 stores, 1 tavern, a number of mechanics' shops, several handsome dwelling houses, and about 300 inhabitants. Royalton Academy was incorporated in 1807, and located here. The town contains 16 schools, 1 grist, 6 saw, and 2 fulling mills, 2 woollen factories, 4 stores, 3 taverns, and 2 tanneries. *Statistics of 1840.*—Horses, 551; cattle, 1,866; sheep, 9,790; swine, 1,469; wheat, bus. 2,727; barley, 29; oats, 17,827; rye, 2,930; buckwheat, 2,896; Ind. corn, 11,383; potatoes, 60,835; hay, tons, 5,173; sugar, lbs. 30,470; wool, 20,828. Pop. 1,917.

RUPERT, a post town in the western part of Bennington county, is in lat. 43° 15' and long. 3° 54', and is bounded north by Pawlet, east by Dorset, south by Sandgate, and west by Hebron, N. Y. It lies 26 miles north from Bennington, and 78 southwest from Montpelier. It was chartered Aug. 20, 1761, containing 23,040 acres. The settlement of this township was commenced in 1767, by Isaac Blood, Reuben Harmon, Oliver Scott, and a Mr. Eastman. Oliver Scott built the first grist mill. It is watered by Pawlet river, which passes through the northeast corner, and by White creek, which originates here in several branches, and runs southwesterly into the Battenkill in Wash-

* For particulars see part second, page 69.

RUTLAND.

RUTLAND.

ington county, N. Y. The surface of the township is uneven, and the eastern part mountainous. It is a very good farming township, and is divided into 9 school districts. It contains a meeting house, 1 grist and 3 saw mills, 1 tannery, and 3 stores. *Statistics of 1840.*—Horses, 217; cattle, 1,237; sheep, 16,190; swine, 778; wheat, bus. 1,442; oats, 4,130; rye, 2,963; buckwheat, 337; Ind. corn, 5,417; potatoes, 30,920; hay, tons, 4,804; sugar, lbs. 5,900; wool, 26,446. Pop. 1,091.

RUTLAND, a post town and capital of Rutland county, is in lat. 43° 37' and lon. 4° 4', and is bounded north by Pittsford, east by Mendon, south by Clarendon, and west by Ira. It lies 50 miles southwest from Montpelier, 60 south from Burlington, and 52 northeasterly from Bennington. It was chartered Sept. 7, 1761, and contains, according to the words of the charter, "exclusive of ponds, rivers, rocks, &c., something more than 26,000 acres of land." The length of the north line is 7 miles and a half, that of the east line, 5 and a half, the south line, 6 and three quarters, and the west, 5 miles and a half. The original proprietors of the township mostly resided in New Hampshire, none of whom ever located themselves permanently in Rutland. Some of the earliest surveys were made in the spring of 1770. Among the earliest proprietor's records now to be found in the town clerk's office, is one bearing date 2d Tuesday of October, 1770. Nothing is known in the early history of the township to distinguish it from the other towns in its vicinity. During the war of the revolution, it was, for some time, a frontier town, and was subject to all the commotions and inconveniences incident to its situation. Through it lay the only military road from Charlestown, N. H., to Ticonderoga and Crown Point, on lake Champlain. During the war, the Vermont troops, or *Green Mountain Boys*, erected here two small picket forts, sufficient to contain about 100 men each. One of them was situated on the ground occupied by the present village in the east parish, about 12 rods north of the spot where the court house now stands. Some of the stumps are still remaining in the highway, covered with earth, and also a well sunk for the accommodation of the garrison. The other fort was situated at the head of the falls in Otter creek, then called Mead's falls. No traces of its position are now remaining. As a means of checking the incursions of the enemy, and of facilitating the communications between the eastern part of the state and lake Champlain, these forts were found to be very useful.

The religious denominations are Congregationalists, Episcopalians, Baptists, and Methodists. There are two Congregational societies, one in each parish, each of which has a large and commodious meeting house. That in the east parish is of brick, that in the west of wood. The 1st Congregational church was organized in the west parish in 1773, and has had the following settled ministers. Rev. Benajah Root, from 1774 to 1787; Rev. Lemuel Haynes, from March 1788 to 1818; Rev. Amos Drury, from June 1819 to April 1829; and Rev. Lucius L. Tilden, from March 1830 to Oct. 1839. Church members, 266. The church in the east parish was organized in 1787, and has had the following ministers. Rev. Heman Ball, from Feb. 1, 1797, to his death, Dec. 17, 1821; Rev. Charles Walker, from Jan. 1, 1823 to March 13, 1833; and Rev. Wm. Mitchell, the present minister, was settled March 14, 1833. Members 323. The Episcopal church was organized in Jan. 1832, by the name of *Trinity Church*, and Rev. John A. Hicks, the present minister, was chosen rector. Their church edifice was erected in the east village, in 1832, and consecrated in May, 1833. Since the organization there have been 55 baptisms, and 60 confirmed. Present communicants 48. No information respecting the other churches. The principal stream is Otter creek, which enters the township about the middle of the south line, and leaves it about the middle of the north line, cutting it into two nearly equal parallelograms. Tributary to this are West river, rising in Tinmouth, and East creek, one of whose branches rises in Chittenden, and the other in Mendon, the latter entering Otter creek, 1 mile above Gookin's falls, and the former about 40 rods below. In addition to these, there are two other streams of less magnitude, flowing in above East creek, on the right bank, the first of which, near the south line, is Cold river, the other, one mile and a half below, is the confluent stream formed by the union of the Moon and Mussey brooks, so called. Near the northwest corner of the township, on the north line, another stream, called Castleton river, enters, and, after pursuing a southerly course about 3 miles, turns to the right, and passes off into Ira. On all of these streams are convenient sites for mills and other machinery, most of which are already occupied. Among the most eligible are two on Otter creek, one at Sutherland's falls, where there are a saw and grist mill, and the other at Gookin's falls (formerly called Mead's falls), where there are also a saw mill and grist mill, together with a woollen factory and a pa-

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per mill. The soil of this township presents all the varieties from heavy loam to a light sand, the eastern half appearing to be chiefly of *primitive formation*, while that of the western is *transitory*. Among the useful minerals are found considerable quantities of iron, superior clay for bricks, and an abundance of lime in almost all its various forms. In the west part several quarries of very beautiful white and clouded marble have been opened, and from which fire-places, monuments, and other useful and ornamental articles are manufactured, both for domestic use and for the New York and other markets. The quarry opened within a few years near Sutherland's Falls, is exceedingly fine and beautiful, and is wrought to great extent. This township is divided into two parishes, denominated *East* and *West* parish. *Rutland village*, situated in the east parish, is the most important place. It is handsomely situated principally on a street running north and south, and contains an Episcopal church, two meeting houses, a court-house and jail, a bank, a printing office, 13 stores, 12 attorneys, 6 physicians, the usual variety of mechanics, and upwards of 100 dwelling-houses. The longitude of the court-house, according to Dr. Williams, is $72^{\circ} 57' 27''$ west from Greenwich. In the west parish are two small villages, called *West Rutland* and *Gookin's Falls*. In the former are a Congregational meeting house, 2 stores, a tavern, and about 20 dwelling-houses. In the latter a Methodist chapel, a store, an extensive paper manufactory, and a variety of mills and machinery. *Sutherland's Falls* is also a place of some business, containing mills for sawing marble, &c. In the town are 16 schools, with 963 scholars. *Statistics of 1840.*—Horses, 475; cattle, 2,518; sheep, 28,332; swine, 1,017; wheat, bus. 3,708; barley, 8; oats, 15,722; rye, 2,199; buckwheat, 915; Ind. corn, 19,347; potatoes, 48,193; hay, tons, 10,025; sugar, lbs. 51,833; wool, 69,902. Population, 2,708.

RUTLAND COUNTY is situated on the west side of the Green Mountains, and is bounded north by Addison county, east by Windsor county, south by Bennington county and west by Washington county, N. Y. It lies between $43^{\circ} 18'$ and $43^{\circ} 54'$ north lat., and between $3^{\circ} 41'$ and $4^{\circ} 19'$ east long., being 42 miles long from north to south, and 34 wide from east to west, and containing 958 square miles. It was incorporated in February, 1781. Rutland, situated near the centre of the county, is the seat of justice. The supreme court commences its session here on the 1st Tuesday after the 4th Tuesday

of January; and the county court on the 2d Tuesdays in April and September. The United States circuit court sits here annually on the 3d and the district court on the 6th day of October. There are several pleasant villages in this county, of which Rutland and Castleton are the most important. Otter creek flows through the county from south to north, and is the principal stream. Black, White and Quechee rivers all originate in the eastern part, and flow easterly into Connecticut river. Pawlet river runs across the southwest corner, and Poultney, Castleton and Hubbardton rivers water the western part. Along Otter creek and in the southwestern part of the county, the surface is level and handsome, and the soil of the first quality. The remaining parts are hilly and broken, but the soil is warm and well adapted to the production of grass and grain. A range of granular limestone passes through the county from south to north along Otter creek, in which a great number of quarries of excellent marble have been opened. Along the foot of the Green Mountains beds of excellent iron ore have been found in several places, particularly in the townships of Tinmouth, Pittsford, Chittenden, and Brandon. The county extends over the height of the Green Mountains through the whole length of the eastern boundary. *Statistics of 1840.*—Horses, 6,200; cattle, 40,023; sheep, 271,727; swine, 15,563; wheat, bus. 40,116; barley, 853; oats, 154,119; rye, 38,013; buckwheat, 10,850; Indian corn, 154,792; potatoes, 642,108; hay, tons, 103,737; sugar, lbs. 396,804; wool, 653,819. Pop., 30,701.

RYEGATE, a post town in the southeast corner of Caledonia county, situated in lat. $44^{\circ} 12'$ and long. $4^{\circ} 54'$, and is bounded north by Barnet, east by Connecticut river, south by Newbury, in the county of Orange, and west by Groton. It lies directly opposite to the township of Bath, in Grafton county, N. H., and contains 20,492 acres, or 32 square miles. It is 33 miles easterly from Montpelier, 58 miles northerly from Windsor, and 150 northwesterly from Boston, as the roads are travelled. It was chartered September 8, 1763. Ryegate was originally settled from Scotland. A company was formed, in 1772, by a number of farmers in the shires of Renfrew and Lenark, for purchasing a tract of land for a settlement in North America, and 1000l. sterling raised to defray the expense. In March, 1773, Mr. David Allen and James Whitelaw, Esq., were sent by the company to explore the country and purchase such a tract of land as their funds would

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permit. After examining much of the country, they purchased the south half of the town of Ryegate, and immediately gave notice thereof to their constituents. In the spring and summer of 1774, a number of families and several young men came over and commenced a settlement. Aaron Hosmer and family were the only persons in town previous to this time. In 1775, 60 persons left Scotland to settle in Ryegate. But unfortunately for them, before they arrived, the revolutionary war had commenced, and they were detained in Boston by Gen. Gage, who gave them their choice, either to join the British army, go to Nova Scotia, or Canada, or return. Some of them settled in Nova Scotia, but they generally returned to Scotland; so that no addition was made to the settlement during the revolution. But they who had settled previously maintained their ground. After peace was concluded, in 1783, a few families arrived, annually, for a number of years, among which were one family which had returned to Scotland from Boston, and two young men who had gone to Nova Scotia, in 1775. These were all of the 60 mentioned above, who ever arrived at Ryegate. There is still now and then a family, or young man from Scotland to join the settlement. Nearly two thirds of the inhabitants of this township are of Scotch descent. They still, in a great measure, follow the habits, and subsist upon the diet to which they were accustomed in Scotland. They introduced the method of manufacturing oat meal into the country, which was a great benefit to the inhabitants during the cold seasons between 1810 and 1817. In those seasons, about 8000 bushels of oats were annually made into meal in this town, and about as many in Barnet. The Scotch inhabitants of this town and Barnet are celebrated, throughout New England, for the manufacture of good butter. The first religious society in this town was the Associate Presbyterian, organized about 1790. From 1791 to 1822 they enjoyed a part of the services of the Rev. David Goodwillie, of Barnet.* In September, 1822, they settled the Rev. Thos. Farrier; and, in 1830, their present pastor, the Rev. Wm. Pringle. This church belongs to the Associate Presbytery of Vermont, in subordination to the Associate Synod of North America. There is here another church called the Scotch

Reformed Presbyter'n church, over which the Rev. William Gibson was settled from 1800 to 1816, and the Rev. James Milligan from 1818 to 1839. The surface of this township is uneven. In the north and east part it is hilly and ledgy. Nearly all of it, however, is fit for pasture, and a large proportion of it arable land. There are only three small tracts of intervale on Connecticut river in this town. The soil, near the river, is principally clay; in other parts of the township, it is a chocolate-colored loam, and in the western part very rich, producing all kinds of grain, and garden vegetables in abundance, but peculiarly adapted to grass. *Ticklenaked pond* lies in the south part of the town, and covers 64 acres. It discharges its waters by a stream, which carries a saw mill, and running south falls into Wells' river a little south of Newbury line. *North pond*, in the north part of the town, discharges its waters to the east into Connecticut river. On its outlet are two saw mills. *Connecticut river*, upon the eastern boundary of this town, is about 24 rods wide. At *Canoe Falls*, against the middle of this town, there is a dam across this river, and a grist and saw mill on the Ryegate side. Just below the fall is Neilson's ferry. Nearly opposite to the southeast corner of the town the Great Ammonoosic river, in New Hampshire, enters the Connecticut. About half a mile above are the *Narrows*, where the whole river is contracted to a breadth of only 80 feet. Just above the narrows is a swift bar, and the course of the river nearly east, but it turns suddenly south through the narrows, where it is remarkably deep and still at low water. The ledge, which forms the east side, is a long ridge, called the saddle, extending from Gardner's mountain, and is not more than four rods broad. In very high floods the water passes over this ridge near the mountain. Below it, the river immediately assumes its usual width. *Wells' river* runs between three and four miles in this town, through the southwest part. It is about four rods wide, and affords many excellent mill seats. The rest of the town is well watered with small streams. *Blue mountain*, situated about a mile northwest of the centre, is the only one in town. This mountain is composed of granite, and affords inexhaustible quarries of mill stones, &c. Limestone is abundant in many parts of the town. The timber is beech, maple, hemlock, spruce, and, near the river and ponds, white pine and oak. There is a good meeting house situated near the centre of the town. The town is divided into 9 school districts

* Since our account of Barnet was printed, we have received from the Rev. Thomas Goodwillie a very full account of the Scotch Presbyterian church in that town, and have to regret that it was not furnished in season to be inserted.

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with a school house in each; 1 store, 1 grist and 5 saw mills. *Statistics of 1840.* Horses, 315; cattle, 1,315; sheep, 5,270; swine, 1,313; wheat, bus. 3,421; barley, 417; oats, 32,952; rye, 27; buckwheat, 37; Indian corn, 3,389; potatoes, 47,176; hay, tons, 3,959; sugar, lbs. 11,308; wool, 9,200. Population, 1,222.

ST. ALBANS, a post town and capital of Franklin county, is in lat. $44^{\circ} 49'$ and long. $3^{\circ} 54'$, and is bounded north by Swanton, east by Fairfield, south by Georgia, and west by lake Champlain, a part of which separates it from North Hero. It lies 25 miles north from Burlington, and 48 northwest from Montpelier. This township was chartered Aug. 7, 1763, containing 23,040 acres. J. Walden is supposed to have been the first civilized person who settled in this township. He removed here during the revolutionary war, and began improvements at the bay. There was no addition to the settlement till 1785, when Andrew Potter emigrated to this township, and from that time the settlement advanced rapidly, by emigrants from the south part of this state, and from the other states of New England. Among the earliest settlers were, the families of Messrs. Potter, Morrill, Gibbs, Green, and Meigs. The town was organized in 1788. Andrew Potter was the first representative in the general assembly. The religious denominations are, Congregationalists, Methodists and Episcopalians. The Rev. Jonathan Nye was the first settled minister. He was settled over the Congregational church from 1807 to 1810, the Rev. Willard Preston from January 8, 1812 to August 2, 1815, Rev. Henry B. Strong from January 22, 1817 to October 4, 1821, and the Rev. Worthington Smith, the present minister, from June 4, 1823. Their house of worship in the village, was built in 1826. The church consists of upwards of 100 members. The Episcopal church, by the name of *Union Church*, was organized about 20 years ago, and from 1825, has had, successively, the services of the following clergymen: the Rev. Joseph S. Coville, the Rev. Sylvester Nash, the Rev. George Allen, and the Rev. Wm. H. Hoit who is the present rector. The church which is in the village, has recently been remodeled, and is now one of the first Episcopal churches in the state. Present communicants, 70. The Methodist society is large and has a chapel in the village, but we are unable to give particulars. There are no large streams, nor good mill privileges in this township. There are, however, several saw mills. The soil is a dark loam, rich and in a good

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state of cultivation. The timber is maple, beech, birch, and, near the lake, oak. *St. Albans village* is very pleasantly situated in the centre of the township. It lies 25 miles north from Burlington, 15 south of Canada line, and 3 miles from the lake. The village, consisting of about 100 dwelling houses, besides stores and other buildings, is situated around a handsome common 25 by 30 rods in extent. The site is elevated and ascends gently towards the east. The public buildings are a court house and jail, 3 houses for public worship, and an academy. There are 12 English and India goods stores, 1 book store, 2 printing offices, 3 taverns, several cabinet makers, 1 hat factory, 2 chair factories, 2 manufactories of tin ware, 1 goldsmith and watchmaker, 3 tanneries, and a variety of other mechanics' shops. There are here 13 practising attorneys, 4 physicians, and 16 merchants. The inhabitants are industrious and enterprising. The first vessel that arrived at the city of New York from lake Champlain through the northern canal was built and owned here. St. Albans Academy, or Franklin county grammar school, was incorporated and established here in November, 1799. At the landing place on Belamaqueen bay, three miles west of St. Albans village, is a small village, and a meeting house; and there is, during summer, a daily line of steamboats, each way, between this place and Burlington, by the way of Plattsburgh and Port Kent. There is, also, a daily line of stages each way through St. Albans village, besides some which are less frequent. *Statistics of 1840.*—Horses, 437; cattle, 1,839; sheep, 13,210; swine, 560; wheat, bus. 5,250; barley, 60; oats, 8,556; rye, 220; buckwheat, 117; Indian corn, 7,112; potatoes, 33,325; hay, tons, 5,180; sugar, lbs. 5,000; wool, 39,175. Population, 2,702.

ST. ANDREWS GORE. *See Plainfield.*

ST. GEORGE, a small township in the central part of Chittenden county, is in lat. $44^{\circ} 24'$ and long. $3^{\circ} 48'$, and is bounded north and northeast by Williston, south by Hinesburgh, and west by Shelburne. It lies 8 miles southeast from Burlington, and 28 nearly west from Montpelier. It was chartered Aug. 18, 1763, and contains only 2,200 acres. The settlement was commenced here in the spring of 1784, by Joshua Isham, from Colchester, Conn. The next year several others joined the settlement. The town was organized in March, 1813. Jared Higbee was first town clerk, and Lewis Higbee first representative. The surface of the township is very uneven, with consider-

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able elevations. The timber is principally maple, beech and birch. There are no streams of consequence, and no mills or mill privileges. The soil is loam, clay and gravel. *Statistics of 1840.*—Horses, 33; cattle, 198; sheep, 1,625; swine, 152; wheat, bus. 217; oats, 1,254; rye, 40; buckwheat, 37; Ind. corn, 616; potatoes, 4,635; hay, tons, 566; sugar, lbs. 1,130; wool, 2,368. Population, 121.

ST. JOHNSBURY, a post town in the eastern part of Caledonia county, is in lat. 44° 27' and long. 4° 58', and is bounded northerly by Lyndon, northeast by Kirby, southeast by Waterford, and southwest by Danville. It lies 37 miles northeast from Montpelier, was granted the 27th of October, and chartered Nov. 1, 1786, to Jonathan Arnold and associates, containing 21,167 acres. James Adams and his son Martin Adams, with their families commenced the settlement on "Benton's meadow," and Simeon Cole on the "Butler meadow," in 1786, and the next year Dr. Jona. Arnold, Dr. Jos. Lord, Barnabas Barker, and others, moved into town. Dr. A. built the first framed house and the first saw mill, in 1787, and the first grist mill in 1788. The town was organized June 21, 1790, and Jonathan Arnold was first town clerk. The religious denominations are Congregationalists, Methodists, and Universalists. The 1st Congregational church was organized Nov. 21, 1809, and then consisted of 19 members. The Rev. Pearson Thurston was settled over this church from Oct. 25, 1815 to Oct. 13, 1817. The Rev. Josiah Morse, the present minister, was settled Feb. 21, 1833. This church consists of 112 members. The 2d Cong. church was organized April 7, 1825. The Rev. Jas. Johnson was settled over it from Feb. 28, 1827, to May 3, 1838. Rev. John H. Worcester, the present minister, was settled Sept. 5, 1839. This church consists of 218 members. A 3d Cong. church was organized in the east village Nov. 25th, 1840, and the same day their meeting-house, recently built, was dedicated.—The Passumpsic river runs through the town from north to south, and receives, just below the *Plain*, the Moose river, a considerable stream from the northeast, and Sleeper's river, a smaller tributary, from the northwest. The amount of available water power furnished by these streams, within the town of St. Johnsbury, exceeds that of any other town in this part of the state, and affords facilities for manufacturing operations to any desirable amount. The business of the town centres in three villages. The *Centre village*, so called, lies upon the

Passumpsic river, in the northerly part of the town. It has been of rapid growth, and does a prosperous business. In it are three meeting houses, Methodist, Congregational, and Universalist,—2 stores, 1 tavern, a saw mill, grist mill, clothier's works, tannery, and various mechanics. The *East village*, situated upon Moose river, in the east part of the town, is the natural centre for the business of parts of St. Johnsbury, Waterford, Concord, Kirby, Victory, and Bradleyvale. It contains a meeting house, 2 stores, 1 tavern, a grist mill, saw mill, oil mill, tannery, and various mechanics. The pleasant village called *the Plain*, containing a meeting house, academy, public house, 2 stores, a printing office, and other mechanics, is situated in the southerly part of the town, and is central between Paddock's Furnace and Fairbanks' manufactory, the former on the Passumpsic and the latter on Sleeper's river. The establishment of Mr. H. Paddock consists of a blast furnace, and a machine shop for finishing every description of mill gear and ordinary machinery. Here are also a grist and saw mill, a carriage factory, a factory for making sash, doors, blinds, &c., on a respectable scale. The establishment of E. & T. Fairbanks & Co. is devoted principally to the manufacture of cast iron ploughs and patent balances. The latter article is manufactured by them extensively, being variously modified and adapted to all the various operations required to be transacted by weight, from the small counter scale used by traders and merchants, to the ponderous Rail Road scale, 50 to 100 feet in length, for weighing trains of cars. The improvement has been patented in the United States and in England, and the article is now in extensive use in both countries, possessing the entire confidence of the public. *Statistics of 1840.*—Horses, 585; cattle, 2,960; sheep, 8,088; swine, 1,383; wheat, bus. 2,478; barley, 286; oats, 28,382; rye, 212; buckwheat, 1,050; Ind. corn, 6,950; potatoes, 74,115; hay, tons, 4,953; sugar, lbs. 50,520; wool, 14,599. Population, 1,887.

SALEM, a post town in the north eastern part of Orleans county, is in lat. 44° 54' and long. 4° 50', and is bounded north by Derby, northeast by Morgan, southeast by Charleston, and southwest by Brownington and Orleans. It lies 50 miles northeast from Montpelier, was granted Nov. 7, 1780, and chartered August 18, 1781 to Col. Jacob Davis and others, containing 17,330 acres. The settlement of the township was commenced by Ephraim Blake in March 1798. Amasa Spencer came into town in 1801, and

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David Hopkins, jr. in 1802. The town was organized April 30, 1822, and Samuel Blake was first town clerk. Clyde river runs through the township in a northwesterly direction, and falls into Salem pond, which is partly in this township and partly in Derby. There is no other stream of consequence, and no mills nor mill privileges in town. There are two other ponds, one of which lies in the course of Clyde river, and the other on the line between this township and Brownington and they are each about one mile in length and three fourths of a mile in breadth. South bay of lake Memphremagog lies between this township and Newport. The surface of the township is uneven but not mountainous. The timber is principally maple, beech, birch, ash, hemlock, spruce, fir, cedar and pine. *Statistics of 1840.*—Horses, 67; cattle, 428; sheep, 961; swine, 294; wheat, bus. 791; barley, 250; oats, 3,073; rye, 16; buck-wheat, 606; Indian corn, 454; potatoes, 13,270; hay, tons, 689; sugar, lbs. 19,420; wool, 1,871. Population, 299.

SALISBURY, a small post town in the central part of Addison county, is in lat. 43° 55' and long. 3° 57' and is bounded north by Middlebury, east by Goshen, south by Leicester, and west by Cornwall and Whiting. It lies 34 miles southwest from Montpelier, 40 south from Burlington, and was chartered Nov. 3, 1761. The first person who came into this township with a view of settling was Amos Storey. He built a log hut which was consumed by fire and he himself was killed by the fall of a tree before his family moved here. Thomas Skeeles and Abel Waterhouse, were the two next to make beginnings. The widow of Mr. Storey, and 8 or 10 small children were the first family which moved into town, and Mrs. Storey was consequently entitled to 100 acres of land, by a vote of the original proprietors. She came into the town the 22d day of February, 1775. She endured almost every hardship, laboring in the field, chopping down timber and clearing and cultivating the soil. She retreated several times to Pittsford during the revolution, on account of the danger apprehended from the enemy, but at length she and a Mr. Stevens prepared themselves a safe retreat. This was effected by digging a hole horizontally into the bank, just above the water of Otter creek, barely sufficient to admit one person at a time. This passage led to a spacious lodging room, the bottom of which was covered with straw, and upon this their beds were laid for the accommodation of the families. The entrance was concealed by bushes which

hung over it from the bank above. They usually retired to their lodgings in the dusk of the evening, and left them before light in the morning, and this was effected by means of a canoe, so that no path or footsteps were to be seen leading to their subterraneous abode.* The family of Abel Waterhouse was the second in town. The religious denominations are Congregationalists and Methodists. The Congregational church was organized Feb. 8, 1804, and the same year built a meeting house. The Rev. Rufus Pomeroy was settled over this church from Sep. 15, 1811 to Nov. 19, 1816, the Rev. Joseph Cheney from March 11, 1819, to March 4, 1823, and the Rev. Eli Hyde from May 30, 1833 to Sept. 27, 1836. The present minister is the Rev. Calvin Butler. Otter creek forms the western boundary of this township. The other streams are Middlebury river, which touches upon the north part, and Leicester river which waters the southern part. Lake Dunmore is about four miles long and from half to three fourths of a mile wide, and lies partly in this township, and partly in Leicester. On the outlet of this pond, called Leicester river, are several falls which afford some fine mill privileges, around which, near the south line of this township, is a thriving little village containing 2 saw mills, 1 grist mill, 1 carding machine, 1 woollen factory, 2 stores and other shops and machinery. The surface of this township is somewhat uneven, but the soil is generally good. The eastern part extends on to the Green Mountains. In the western part, are some fine tracts of meadow. In the mountain east of lake Dunmore is a cavern which consists of a large room, and is thought to have been inhabited by the Indians, as their arrows and other instruments have been found here. There are several considerable swamps, which furnish cedar for fencing and other purposes. The timber is maple, beech, oak, pine, cedar, &c. The stage road from Rutland to Middlebury passes through the village in this township. The town contains 10 schools, 2 stores, 1 grist and 6 saw mills, a glass manufactory &c. *Statistics of 1840.*—Horses, 164; cattle, 740; sheep, 5,200; swine, 490; wheat, bus. 1,460; oats, 6,300; rye, 800; buck-wheat, 150; Indian corn, 5,060; potatoes, 20,240; hay, tons, 2,150; sugar, lbs. 5,600; wool 15,900. Population, 942.

* Mrs. Storey afterwards married Mr. Benjamin Smalley one of the first settlers of Middlebury. Mrs. S. and her underground room occupy a prominent place in the recent historical tale. "The Green Mountain Boys," by Daniel P. Thompson, Esq.

SANDGATE.

SAXTON'S RIVER.—SEARSBURGH.

SHAFTSBURY.

SALTASH.—Name altered to Plymouth, February 23, 1797. *See Plymouth.*

SANDGATE, a post town in the western part of Bennington county, is in lat. $43^{\circ} 10'$ and long. $3^{\circ} 54'$, and is bounded north by Rupert, east by Manchester, south by Arlington, and west by Salem, N. Y. It lies 20 miles north from Bennington, 31 southwest from Rutland, and was chartered Aug. 18, 1761. The settlement was commenced in 1771 by a Mr. Bristol. The religious denominations are Congregationalists and Methodists. The surface of this township is very broken and mountainous. The most considerable elevations are Shettarack and Bald Mountain in the northwest corner, Spruce and a part of Equinox mountain in the northeastern part, Red mountain in the southeast part and Swearing hill in the southwest part. The streams are all small, consisting of several branches of the Battenkill, and of White creek, and the mill privileges are few. The town is divided into 9 school districts, and contains 1 store, 1 grist, 1 fulling and 3 saw mills, and 1 woollen factory. *Statistics of 1840.*—Horses, 169; cattle, 885; sheep, 8,437; swine, 593; wheat, bus. 612; oats, 8,225; rye, 3,138; buck-wheat, 1,387; Indian corn, 3,427; potatoes, 23,278; hay, tons, 3,145; sugar, lbs. 5,725; wool, 17,020. Population, 777.

SAXTON'S RIVER, is formed in Grafton by the union of several streams from Windham, and running an easterly course about ten miles through the south part of Rockingham, falls into Connecticut river in the northeast corner of Westminster, about one mile below Bellow's Falls. It derives its name from a Mr. Saxton, who unluckily fell into it while crossing it on a log, for the purpose of surveying the line between Rockingham and Westminster, but was not drowned, as stated in our former edition.

SEARSBURGH, a post town in the eastern part of Bennington county, is in lat. $42^{\circ} 45'$ and long. $4^{\circ} 6'$, and is bounded north by Somerset, east by Wilmington, south by Readsborough, and west by Woodford. It lies 11 miles east from Bennington and 17 west from Brattleborough. It was granted and chartered to William Williams and others, Feb. 23, 1781, containing 10,240 acres. Deerfield river enters this township from Somerset, and, after passing across the north east corner, crosses the east line into Wilmington. It lies mostly upon the Green Mountains, and the greatest part of it is incapable of being settled. Haystack mountain lies partly in the northeast corner. *Statistics of 1840.*—Horses,

19; cattle, 98; sheep, 77; swine, 27; wheat, bus. 8; oats, 390; rye, 24; buck-wheat, 70; potatoes, 2,240; hay, tons, 158; sugar, lbs. 5,640; wool, 234. Population, 120.

SEYMOUR LAKE. *See Morgan.*

SHAFTSBURY, a post town in the western part of Bennington county, is in lat. $42^{\circ} 58'$ and long. $3^{\circ} 54'$, and is bounded north by Arlington, east by Glastenbury, south by Bennington, and west by Cambridge, N. Y. It lies 97 miles southwest from Montpelier. It was chartered Aug. 20, 1761, containing by charter 23,040 acres. The settlement of this town was commenced about the year 1763. Among the early settlers may be mentioned Messrs. Cole, Willoughby, Clark, Doolittle, Waldo, and several families of Mattisons. The Hon. Jonas Galusha, late Governor of Vermont, came into this town in the spring of 1775. During the revolutionary war he was made captain of one of the two companies of militia in this township, and the other was commanded by Captain Amos Huntington. Capt. Huntington was taken prisoner at the battle of Hubbardton, and sent to Canada, after which the two companies were united under the command of Capt. Galusha, who fought at their head in Bennington battle. The town was organized some time before the revolution, and Thomas Mattison was first town clerk, which office he held more than 40 years. The Baptists are the most numerous religious denomination, and they have two societies. The town gives name to the Baptist association in this section of the state, it being called the "Shaftsbury association," and is one of the first formed in the state. The Rev. Caleb Blood was for many years a zealous and successful preacher of the gospel here. He removed to Boston about the year 1807. Rev. Isaiah Mattison has been settled over one of the Baptist churches more than 40 years, and still continues his faithful labors. Rev. Joseph W. Sawyer is minister of the other church. The Universalists have no settled minister. Dr. Daniel Huntington was for many years the only practising physician. This township lies between the Battenkill and Walloomscoik rivers, and consequently has no large streams. Some tributaries of each of these rivers rise here, which afford several mill privileges. West mountain lies partly in this township and partly in Arlington. It extends into Shaftsbury about 3 miles, and is about 2 miles in width. This mountain is timbered with chestnut, oak, maple, birch, &c. The soil is generally of a good quality, and in the southwestern

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part is probably not exceeded in fertility by any in the state. The timber on the high lands is mostly chestnut and oak. There is a small tract here which was formerly covered with a beautiful growth of white pine, of which nothing now remains but the stumps. The minerals are iron ore, of an excellent quality, of which large quantities were conveyed to Bennington furnace, and a beautiful white marble, which has been extensively quarried. There are 3 meeting houses in town, 2 belonging to the Baptists, and built more than 50 years ago, and 1 to the Universalists, built in 1836. The town is divided into 16 school districts, in two of which are elegant two-story brick school-houses, having bells, and 2 well furnished school rooms in each. There are in town 2 stores, 2 taverns, 2 grist, 12 saw, and 2 paper mills, and 1 woollen factory. *Statistics of 1840.*—Horses, 538; cattle, 2,246; sheep, 24,436; swine, 1,538; wheat, bus. 1,999; barley, 20; oats, 28,857; rye, 3,628; buckwheat, 3,861; Ind. corn, 12,684; potatoes, 50,000; hay, tons, 4,380; sugar, lbs. 9,527; wool, 43,682. Population, 1,835.

SHARON, a post town in the north part of Windsor county, is in lat. 43° 47' and long. 4° 35', and is bounded north by Strafford, east by Norwich, south by Pomfret, and west by Royalton. It lies 22 miles north from Windsor and 34 south-east from Montpelier. It was chartered August 17, 1761, containing 23,795 acres. The settlement of this township was commenced about the year 1765, by emigrants from Connecticut. As near as can be ascertained, Robert Havens and family were the first who wintered in the township. The town was organized March 8, 1768, and Benjamin Spalding was first town clerk. The religious denominations are Congregationalists, Baptists and Methodists. The Congregational was the first church formed, and was organized September 11, 1782. The Rev. Lathrop Thompson was the first settled minister, and was ordained over this church Dec. 3, 1788, and dismissed March 26, 1793. The Rev. Samuel Bascom was settled March 12, 1806. Mr. Joel Marsh was the first settler on White river in Sharon, and was, for 40 years, a justice of the peace. White river runs through this township in an easterly direction, and affords a number of valuable mill privileges. On one of these near the centre are erected an excellent saw and grist mill, and on another towards the eastern part is a paper mill and some other machinery. There are several smaller streams on which mills are erected. The surface of

the township is very uneven and broken, but the soil is good, producing fine crops of corn, grain and grass. The Congregational meeting house is situated near the centre of the town. Around the meeting house is a pleasant and flourishing little village, lying on the bank of White river, and containing a variety of mills, mechanic's shops, &c. There are in town 13 school districts and school houses, 3 grist, 1 paper, 1 fulling and 7 saw mills, 1 carding machine, 2 stores, 4 taverns and 1 tannery. *Statistics of 1840.* Horses, 328; cattle, 1,590; sheep, 10,524; swine, 1,204; wheat, bus. 2,774; oats, 16,410; rye, 1,771; buckwheat, 2,930; Indian corn, 9,142; potatoes, 41,735; hay, tons, 3,813; sugar, lbs. 8,580; wool, 20,602. Population, 1,371.

SHARPSHIN POINT, a high, rocky point situated in the north side of Burlington bay, 1 mile and 217 rods from the south wharf in Burlington.

SHEFFIELD, a township in the north part of Caledonia county, is in lat. 44° 57' and long. 4° 51', and is bounded northeast by Glover and a part of Barton, easterly by Sutton, and south and southwest by Wheelock. It lies 35 miles northeast from Montpelier, and 40 miles north from Newbury. This township was granted Nov. 7, 1780, containing 22,607 acres. The settlement of this township was commenced about the year 1792. The township lies on the height of lands which separates the waters which flow into Connecticut river from those which flow into the lakes. It is watered by some of the head branches of the Passumpsic and also of Barton river. In the north part are several small ponds. The streams here afford several good mill privileges, some of which are occupied. *Statistics of 1840.* Horses, 148; cattle, 949; sheep, 2,490; swine, 465; wheat, bus. 1,396; barley, 876; oats, 5,902; rye, 70; buckwheat, 924; Indian corn, 725; potatoes, 39,200; hay, tons, 2,292; sugar, lbs. 25,615; wool, 4,273. Population, 821.

SHELBURNE, a post town in the western part of Chittenden county, is in lat. 44° 23' and long. 3° 49', and is bounded north by Burlington, east by St. George, south by Charlotte, and west by lake Champlain. It lies 33 miles west from Montpelier and 26 miles northwesterly from Middlebury. It was chartered August 18, 1763, containing, exclusive of bays and ponds, 14,272 acres. A small settlement was made in this township previous to the revolutionary war. The earliest settlers were two Germans by the name of Logan and Pottier, who commenced upon two points of land extend-

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ing into lake Champlain, which still bear the names, "Pottier's point" and "Logan's point." The first settlers were employed principally in getting out lumber for the Canada market, and tradition says that Pottier and Logan were murdered for their money, near the north end of lake Champlain, by a party of soldiers sent out from Montreal to protect them from the Indians, on their return after having sold a raft of lumber. Before the revolution commenced, there had about ten families settled along the lake shore, among whom were Thomas and Moses Pierson. The Messrs. Piersons had a large crop of wheat which was harvested before the town was abandoned on the advance of the British up the lake, and they came here during the fall with a number of hands for the purpose of threshing it out. While engaged in this business they were attacked by a party of Indians, and two of their number, Barnabas Barnum and Joshua Woodward, were killed. The others, however, succeeded in repelling the Indians, and securing the grain. During the war the settlement was abandoned, but recommenced immediately upon its close. The early settlers were mostly from Connecticut. In 1787 there were about 24 families here, and on the 29th of March of this year the town was organized. Caleb Smith was the first town clerk. The principal religions denominations are Episcopalians and Methodists. The Methodist church is the most numerous, and has a neat chapel, built in 1831, and parsonage at the centre of the town. There was a small Episcopal parish here, under the charge of the Rev. Bethuel Chittenden, soon after the town was settled; but the present organization, by the name of *Trinity Church*, was effected about 1819, when the Rev. Joel Clapp was settled here, who continued 4 or 5 years. The present minister is the Rev. Charles Cleveland. Their church is of wood, and was erected in 1807. The epidemic of 1813 was very mortal. Laplot river is the principal stream, and affords some mill privileges. Shelburne bay extends about four miles into the township in a southeasterly direction. Pottier's or Shelburne point projects into the lake on the southwest side of this bay. Shelburne pond is in the northeastern part of the township, and covers about 600 acres. The soil is of an excellent quality, and is principally timbered with hard wood. There are, in town, 13 school districts, 2 saw, 1 grist and 1 fulling mill, 2 stores and 1 tavern. *Statistics of 1840.*—Horses, 304; cattle, 1,376; sheep, 17,636; swine, 999; wheat, bus.

1,768; barley, 772; oats, 11,545; rye, 944; buckwheat, 462; Ind. corn, 5,854; potatoes, 35,281; hay, tons, 2,158; sugar, lbs. 1,220; wool, 36,677. Popula. 1,089.

SHELBURNE POINT. *See Pottier's Point.*

SHELBURNE BAY. *See Shelburne.*

SHELDON, a post town in the central part of Franklin county, is in lat. 44° 54' and long. 4° 5', and is bounded north by Highgate and Franklin, east by Enosburgh, south by Fairfield and west by Swanton. It lies 46 miles northwest from Montpelier and 32 northeast from Burlington. The township was chartered August 18, 1763, containing 23,040 acres. The settlement of this township was commenced about the year 1790, by Col. Elisha Sheldon and Sam'l B. Sheldon, emigrants from Salisbury, Con. The settlement advanced with considerable rapidity, and the town was soon organized. Samuel B. Sheldon was the first town clerk, and also the first representative. The religious denominations are Methodists, Episcopalians and Congregationalists. Each of these churches is small. The Congregational church was organized in 1816, and the Episcopal church by the name of *Grace Church*, not far from the same time. Neither has at present a settled minister. There are two houses for public worship in which each denomination has a share, and one belonging to the Episcopalians, built in 1824. The only streams of consequence are Missisco river, which runs through the township from east to west, and Black creek, a considerable tributary of the Missisco. On the latter are some good mill privileges. The surface of the township is diversified with hills and vallies, and the soil is generally good and easily cultivated. There are in town 9 school districts, 1 grist, 1 fulling and 4 saw mills, 1 woollen factory, 5 stores, 3 taverns, and 2 tanneries. *Statistics of 1840.*—Horses, 300; cattle, 2,300; sheep, 5,900; swine, 600; wheat, bus. 3,850; oats, 7,800; rye, 760; buckwheat, 400; Indian corn, 5,000; potatoes, 66,185; hay, tons, 4,340; sugar, lbs. 29,270; wool, 14,721. Population, 1,734.

SHERBURNE, a post town in the eastern part of Rutland county, is in lat. 43° 38' and long. 4° 15', and is bounded north by Stockbridge, east by Bridgewater, south and west by Mendon. It lies 22 miles northwest from Windsor, and 9 northeast from Rutland. It was chartered to Ezra Stiles and Benjamin Ellery, of Newport, R. I., by the name of Killington, July 7, 1761, containing 23,040 acres. A tract of land, called Parker's gore, lying between this township and Bridgewater, was annexed to it November 4, 1822. It

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was surveyed and lotted, into 70 equal shares, by Simeon Stevens, in 1774. The settlement was commenced in 1785, by Isaiah Washburn. The town was organized in 1794. Albro Anthony was the first town clerk, and John Anthony the first representative. A Congregational church was formed here March 26, 1823; but there is no meeting house or settled minister. Quechee river originates near the northwest corner of the town; and, after running a southeasterly course 7 miles, enters Bridgewater. There are several tributaries to this river, which are sufficiently large for mills. There are three natural ponds here, covering about ten acres each. From one of these issues a stream called Thundering brook, in which is a considerable fall. This township is very mountainous and broken except a narrow strip along Quechee river, where there is some very good intervale. The celebrated summit of the Green Mountains called Killington Peak is situated in the south part, and is 3,924 feet above tide water. There are in town 8 schools, 1 store, 2 taverns, and 4 saw mills. *Statistics of 1840.*—Horses, 82; cattle, 625; sheep, 1,450; swine, 217; wheat, bus. 626; barley, 153; oats, 1,787; rye, 216; buckwheat, 602; Indian corn, 762; potatoes, 12,245; hay, tons, 1,295; sugar, lbs. 6,970; wool, 4,257. Population, 498.

SHOREHAM, a post town in the southwest corner of Addison county, is in lat. 43° 53' and long. 3° 45', and is bounded north by Bridport, east by Whiting and Cornwall, south by Orwell, and west by lake Champlain, which separates it from Ticonderoga, N. Y. It lies 40 miles south of Burlington, 12 southwest from Middlebury, and was chartered October 8, 1761, containing 26,319 acres. The settlement was commenced about the year 1766, by Col. Ephraim Doolittle, Paul Moore, Marshal Newton and others. They adopted the Moravian plan, and had all things common until the settlement was broken up during the revolutionary war. On the return of peace the settlement was recommenced by some of the former settlers and others from Massachusetts and Connecticut, and the town was soon organized. Eliakim Culver was the first town clerk, and James Moore the first representative. The religious denominations are Congregationalists, Baptists, Methodists and Universalists. Rev. Abel Woods, of the Baptist order, was the first settled minister. The Congregational church was organized in May, 1792. Rev. Evans Beardsley was settled over it from Dec. 26, 1805, to May 9, 1809; the Rev. Daniel O. Morton from June 30,

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1814, to Oct. 13, 1831; and the Rev. Josiah F. Goodhue, the present minister, was settled Feb. 12, 1834. Their meeting house, situated near the centre of the town, was built in 1800. The minister of the Universalist society is the Rev. Kittredge Haven. Hon. Charles Rich, late member of Congress, who was for more than 20 years a representative in the state, or national government, was, for about 40 years, a resident in this town. He died here on the 15th of October, 1824, aged 53 years. The only stream of consequence is Lemonfair river, which affords some good mill privileges. Nearly all the waters in town are impregnated with Epsom salts. The surface is level, the soil good, and produces fine crops of corn and grain. This may be considered one of the handsomest and best farming towns in the state. In the eastern part is a bed of iron ore. The average width of the lake against this township is about half a mile. Newton academy was incorporated and located here in 1811, and is now under the charge of Mr. Eastman. There are, in town, 14 school districts, 2 grist, 1 fulling and 4 saw mills, 4 stores, and 3 tanneries. *Statistics of 1840.*—Horses, 520; cattle, 5,350; sheep, 41,188; swine, 1,206; wheat, bus. 3,348; barley, 19; oats, 12,460; rye, 674; buckwheat, 564; Indian corn, 8,580; potatoes, 26,180; hay, tons, 13,560; sugar, lbs. 2,160; wool, 95,276. Population, 1,675.

SHREWSBURY, a post town in the eastern part of Rutland county, is in lat. 43° 31' and long. 4° 11', and is bounded north by Mendon, east by Plymouth, south by Mount Holly, and west by Clarendon. It lies 22 miles west from Windsor, and nine southeast from Rutland. It was chartered September 4, 1763, containing 44 square miles. This township lies mostly on the Green Mountains and the eastern part is very much elevated. In the north part is Shrewsbury peak, which is one of the highest summits of the Green Mountains, and is more than 4100 feet above the tide water. This is often mistaken for Killington peak. Mill river runs through the southwest part of the township, and Cold river through the north part, both of which are sufficiently large for mills. There are two considerable ponds in the southerly part called Peal's and Ashley's pond. There is a branch of the Congregational church in Clarendon here, which consists of a few members. There is a meeting-house situated in the southerly part of the township, around which is a small village. This township is well adapted to the production of grass, and the timber is such

SLOOP ISLAND.

SOMERSET.—SOUTH BAY.—SOUTH HERO.

SPRINGFIELD.

as is common to the mountain towns. There are, in town, 6 saw mills, 4 stores and extensive copperas works. *Statistics of 1840.*—Horses, 339; cattle, 2,969; sheep, 4,750; swine, 689; wheat, bus. 528; oats, 7,716; rye, 1,477; buck-wheat, 43; Ind. corn, 1,658; potatoes, 55,005; hay, tons, 4,788; sugar, lbs. 38,981; wool, 11,835. Population, 1,218.

SLOOP ISLAND, a small island in the lake against Charlotte, said to have been mistaken for a sloop and fired upon, in a fog, during the revolution.

SMITHFIELD. *See Fairfield.*

SOCIALBOROUGH. *See Clarendon.*

SOMERSET, a township in the western part of Windham county, in lat. 42° 58' and long. 4° 8', and is bounded north by Stratton, east by Dover and a part of Wardsborough, south by Searsburgh and a part of Wilmington, and west by Glas-tenbury. It lies 14 miles northeast from Bennington and 16 northwest from Brattleborough. The township is but little settled, and is very mountainous. The most noted mountain is mount Pisgah, which extends along the eastern part of the township. Deerfield river is the principal stream. It runs through the town-ship from north to south. Moose branch runs along the western part of the town-ship, and unites with Deerfield river in Searsburgh. It contains three school-houses, 4 saw mills and a meetinghouse. *Statistics of 1840.*—Horses, 41; cattle, 421; sheep, 426; swine, 170; wheat, bu. 115; barley, 52; oats, 1,531; rye, 284; buck wheat, 144; Indian corn, 151; po-tatoes, 9,930; hay, tons, 777; sugar, lbs., 5,440; wool, 993. Population, 262.

SOUTH BAY. There are two bays of this name; one at the south end of lake Champlain near Whitehall, and the other at the south end of lake Memphremagog, between Salem and Newport.

SOUTH HERO, a post town in the south part of Grand Isle county, is in lat. 44° 38', and long. 3° 44', and is bounded north by the township of Grand Isle, and on all other parts by lake Champlain. It lies twelve miles northwest from Burlington and 16 southwest from St. Albans. This township was chartered together with Grand Isle, North Hero, and Vineyard, to Ethan Allen, Samuel Herrick and others, October 27, 1779. North and South Hero were separated into two townships in 1788, and in 1798 South Hero was divided into two townships by the name of South Hero and Middle Hero. The name of Middle Hero has since been altered to Grand Isle.—South Hero contains 9,065 acres. The settlement was commenced here about

the year 1784. A Congregational church was formed in this town in 1795 and a Methodist society in 1802. In the early settlement of this part of the country the inhabitants of this as well as other town-ships in Grand Isle county were afflicted with intermittent fevers; but since the country has become cleared and cultiva-ted, this is as healthy as almost any por-tion of the state. The communication between this township and Chittenden county is facilitated by a sand bar, which renders the lake fordable for a considera-ble part of the year. The mouth of the river Lamoille is now more than a mile south of the sand bar, but it is supposed to have been formerly on the north of it; and this bar has probably been formed by the sand brought down by this river. The sand is thought to be continually accu-mulating and this bar may at some future period become a dry and permanent road from the island to the main land. The basis of this, as well as of the other islands, which constitute Grand Isle county, is limestone of different varieties, but mostly of the compact kind. In some parts it abounds with shells. The surface of the land is generally level. The soil is ex-cellent, consisting of loam, sand, marl and clay, but marl is the most common. There is but little doubt but that lake Champlain was once much more exten-sive than it is at present, and the whole of the county of Grand Isle was probably covered with water. The limestone in South Hero is generally of the shelly kind, makes good lime, and some quar-ries of it, though capable of being burned into lime, are employed for fire places, and will endure the heat of a culinary fire for a long time. *Statistics of 1840.*—Horses, 207; cattle, 984; sheep, 10,779; swine, 575; wheat, bu., 1,917; barley, 479; oats, 8,638; rye, 2,278; buckwheat, 411; Indian corn, 3,000; potatoes, 13,-076; hay, tons, 2,182; sugar, lbs. 6,852; wool, 23,044. Population, 664.

SPRINGFIELD, a post town in the south east corner of Windsor county, is in lat. 43° 17' and long. 4° 28', and is bounded north by Weathersfield, east by Connect-icut river, which separates it from Charles-town, N. H., south by Rockingham, and west by Chester and a small part of Bal-timore. It lies 13 miles south from Wind-sor, 68 from Montpelier and 30 north from Brattleborough. It was chartered Au-gust 20, 1761, containing 26,400 acres. Among the first settlers were Mr. Simeon Stevens and the Hon. Lewis R. Morris. There are five religious societies, Congre-gationalists Baptists, Methodists, Episco-palians and Universalists. The Congre

SPRINGFIELD.

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gationalists built a meeting house in 1792, and settled the Rev. Robinson Smiley in 1801, who was succeeded in 1827 by the Rev. Mr. Goodman. He continued five years, and was succeeded by the Rev. D. O. Morton, who also continued five years, and was succeeded by the Rev. H. B. Holmes, who continued three years. Rev. C. D. Noble is their present minister. In 1834 they built a new meeting house, and the same year the Episcopalians and Universalists built a house in union. The Baptists built a house in 1836, and have since settled the Rev. B. Brierly. The Methodist society is large, and is supplied by circuit preachers, and the Universalists are generally supplied with preaching. The Episcopal church, called *Union Church*, is small and without a minister. There are two villages, the centre and the north. The *Centre village* contains 5 stores, 2 taverns, 1 cotton, 1 satinet and 1 cassimere factory, each 4 stories high, a paper mill 100 feet long, an extensive sand paper manufactory, a machine-card manufactory, an oil mill, iron foundry, and various other mills and machinery. This village is situated at the falls in Black river $4\frac{1}{2}$ miles from its junction with the Connecticut. These falls amount to 110 feet in an eighth of a mile, 50 of which are nearly perpendicular, and they are regarded as one of the greatest curiosities in the state. In some places the channel through which the river passes is not more than 3 yards wide, and for 20 rods it passes through a deep ravine from 3 to 5 yards wide, walled by perpendicular ledges of mica slate from 60 to 80 feet high. The village and all the scenery about is highly romantic and interesting. The *North village* is 3 miles north of the centre, and contains 3 stores, 1 tavern, 1 grist mill, 1 saw mill, 1 tannery, and several shops. In other parts of the town are 1 grist and 5 saw mills. The production of silk has received considerable attention here for a few years past, and more than 1000 lbs. of cocoons have been produced in a year. Among the minerals may be mentioned granite suitable for building, quartz suitable for making sand paper, limestone, mica slate, tremolite, epidote, serpentine, titanium, scapolite, schorl, yenite, hornblende, garnet, aluminous slate and galena. There are in town 17 school districts and one high school. *Statistics of 1840.*—Horses, 433; cattle, 2,643; sheep, 18,583; swine, 1,198; wheat, bus. 2,305; barley, 873; oats, 17,527; rye, 8,260; buckwheat, 7,455; Indian corn, 3,181; potatoes, 46,603; hay, tons, 6,345; sugar, lbs. 13,247; wool, 48,412. Population, 2,625.

STANFORD, a township in the south part of Bennington county, is in lat. $42^{\circ} 47'$, and long. $4^{\circ} 0'$, and is bounded north by Woodford, east by Reedsborough, south by Clarksburgh, Mass. and west by Pownal. It lies nine miles southeast from Bennington, 21 southwest from Brattleborough, and was chartered March 6, 1753, containing, by charter, 23,040 acres. The surface of this township is very uneven, and a considerable share of it waste land. The south part is watered by some of the head branches of Hoosic river. In the north part are several natural ponds, the most important of which are Moose pond and Fish pond. The waters from this part run northerly into the Walloomscoik. The streams here are all small. The town is divided into four or five school districts, and contains several mills. *Statistics of 1840.*—Horses, 112; cattle, 572; sheep, 1,259; swine, 292; wheat, bu. 267; barley, 6; oats, 3,666; rye, 355; buckwheat, 398; Indian corn, 569; potatoes, 14,755; hay, tons, 1,652; sugar, 21,050; wool, 3,059. Population, 662.

STARKSBOROUGH, a post town in the north part of Addison county, is in lat. $44^{\circ} 13'$ and long. $4^{\circ} 0'$, and is bounded north by Huntington and Hinesburgh, east by Huntington and Buel's gore, south by Lincoln and Bristol, and west by Monkton. It lies 22 miles southwest from Montpelier, and 20 southeast from Burlington. It was granted November 7, 1780, and chartered the 9th of the same month, containing 18,500 acres. A part of Monkton has since been annexed to it. The settlement was commenced in April, 1788, by George Bidwell and Horace Kellogg with their families. John Ferguson and Thomas V. Ratenburgh came into that part of Monkton which has since been added to this township, about the same time. The first settlers emigrated principally from New York and Connecticut. Mr. Bidwell lived 52 years on the place where he settled, endured at first many privations and hardships, but by industry and economy acquired a handsome landed property, and died April 13, 1840, aged 84. He was in his day one of the principal men in the town and he is still remembered with gratitude and affection. The town was organized in March, 1796. Warner Pierce was first town clerk, and John Ferguson first representative, both chosen this year. The religious denominations are Congregationalists, Methodists, Friends and Freewill Baptists. The Congregational church was organized Aug. 7, 1804, but has had no settled minister. The Friends have a meetinghouse built in 1812, which was, in 1824,

STERLING.

STEVEN'S RIVER.

STOCKBRIDGE.

the only one in town. There were some cases of the epidemic in 1813, but it was less distressing here than in the adjacent towns. Mrs. Hannah Lane died here in November, 1823, aged 100 years and three months. The principal stream in this township is Lewis creek, which rises in the southeastern part, and runs first westerly and then northerly along the western part. Huntington river waters the eastern part. The streams here abound with excellent mill seats. The surface of the township is very uneven. A mountain lies along the west line and extends into Bristol, called Hogback. Another range extends through the central parts from south to north, called East mountain, dividing the waters of Lewis creek from those of Huntington river. Here is a stream which is formed by the confluent waters of three springs that are not more than 20 rods asunder. They unite, after running a short distance, and form a stream sufficient for a saw mill, a fulling mill, a forge and two trip-hammer shops, all within half a mile of its head. The soil is mostly loam. The timber is principally hard wood, with some spruce, hemlock and cedar. There are two small villages, both near Lewis' creek, in the westerly part of the township. The principal village contains a store, tavern, post office, forge, fulling mill, trip hammer shop, &c. There are in town 14 school districts, with 488 scholars, 1 grist mill, 1 forge, producing 60 tons annually of bar iron, 2 trip hammer shops, 3 saw mills, 1 fulling mill, 1 carding machine, 1 tannery, 1 tavern and 3 stores. The mills, are mostly situated on Lewis' creek and its branches. *Statistics of 1840.*—Horses, 242; cattle, 1,087; sheep, 4,216; swine, 698; wheat, 1,478; oats, 7,360; rye, 1,064; buckwheat, 396; Ind. corn, 5,800; potatoes, 30,200; hay, tons, 3,120; sugar, lbs. 10,690; wool, 10,260. Population, 1,263.

STERLING, a township in the central part of Lamoille county, is in lat. 44° 35', and long. 4° 16', and is bounded northerly by Johnson, easterly by Morris-town, southerly by Mansfield, and westerly by Cambridge. It lies 24 miles northeast from Burlington, and the same distance northwest from Montpelier. This township was chartered February 25, 1782, containing 23,040 acres. Sterling contains no large streams, and is but thinly inhabited. The settlement was commenced about the year 1799. Its surface is mountainous and part of it very elevated. Sterling peak, in the southern part, ranks among the highest submits of the Green Mountains. It contains two saw mills and three schoolhouses. *Statistics of*

1840.—Horses, 44; cattle, 456; sheep, 1,087; swine, 207; wheat, bu. 536; oats, 738; Ind. corn, 262; potatoes, 10,870; hay, tons, 833; sugar, lbs. 5,400; wool, 1,806. Population, 193.

STERLING PEAK. *See Sterling.*

STEVEN'S BRANCH. *See Barre.*

STEVEN'S RIVER, is a lively little stream, two branches of which have their sources in Peacham and one in Ryegate, and all meet about a mile east of the line between Barnet and Peacham. It runs easterly through the middle of Barnet, and falls into the Connecticut. On each of the branches which rise in Peacham, are several mills in that town. The branch that has its source in Ryegate carries one saw mill in that town, and passes through Harvey's Lake, which is a beautiful sheet of water, in Barnet, 1½ mile long, and 200 rods wide at the widest part, and covering 300 acres. There are on this stream within the limits of Barnet a number of mills and factories. At Stevens' village, about half a mile from the mouth of the river, is a high fall, perhaps 60 or 70 feet.

STOCKBRIDGE, a post town in the northwestern part of Windsor county, situated in lat. 43° 45', and long. 4° 18', and containing about 48 square miles. It is bounded northerly by Bethel, easterly by Barnard, southerly by Sherburne, and westerly by Pittsfield, and lies 36 miles south westerly from Montpelier, and 26 miles northwest from Windsor. The charter is dated July 21, 1761. The settlement of this township was commenced in 1784, and 1785 by Asa Whitcomb, Elias Keyes, John Durkee and Joshua Bartlet, with their families. The settlement of the town proceeded slowly for some years. The first grist mill and first saw mill were erected by the Hon. Elias Keyes, in 1786. The town was unorganized until about the year 1792. The prevailing religious denominations are Congregationalists, Methodists, Baptists, and Universalists. The Rev. Justin Parsons was settled over the Congregational church in this town and Pittsfield September 15, 1812. He continued till 1827, when a separate church was organized here, over which the Rev. Gilman Vose was settled from 1829 to 1831. The Rev. T. S. Hubbard, the present minister, was settled in 1840. In 1803 the dysentery swept off a great part of the children in this town, and in 1813 the spotted fever prevailed and proved very fatal. The town has generally been very healthy. White river runs through the northerly part of this town, and in its passage receives the fourth branch, or Tweed river, from the west. The mill privileges are sufficiently numerous, but those

STOW.

at the Great Narrows in White River are the best. The whole river is here compressed into a channel but a few feet in width. A post office is established here called Gaysville, and a small village has sprung up. Steatite, or soapstone, is found in considerable quantities in the north part of the town, but it is of a quality inferior to that found in Bethel, Bridgewater and several other places in the state. There are here 2 meeting houses, 13 school districts, 2 grist mills, 4 saw mills, 2 fulling mills, 1 woollen factory, 2 stores, 2 taverns, and 1 tannery. *Statistics of 1840.*—Horses, 333; cattle, 1,605; sheep, 8,402; swine, 553; wheat, bus. 1,746; barley, 30; oats, 8,347; rye, 962; buckwheat, 3,008; Ind. corn, 4,982; potatoes, 42,680; hay, tons, 4,057; sugar, lbs. 34,320; wool, 18,005. Population, 1,419.

Stow, a post town in the south part of Lamoille county, is in lat. 44° 28', and long. 4° 20', and is bounded north by Morristown, east by Worcester, south by Waterbury, and west by Mansfield. It lies 15 miles in a straight line northwest from Montpelier, and 25 east from Burlington, and was chartered June 8, 1763, containing 23,040 acres. The settlement was commenced about the year 1793. The town was organized in March, 1797, and Josiah Hurlbut was first town clerk. It was first represented by Nathan Robinson, in 1801, and for 13 years afterwards. He died in April, 1842. The religious denominations are Congregationalists, Methodists, Baptists, Christians, and Universalists, most of which have regular preaching on the Sabbath. There are 4 handsome meeting houses, 3 at the centre and one in the west part of the town. The first was built in 1818, and now owned by the Universalists and Christians; the second by the Congregationalists, in 1840; the third by the Methodists, in 1841; and a union house in the west part, also in 1841. There are four small villages. The *Centre village* is largest, containing three meeting houses, 4 stores, 1 tavern, 4 attorney's offices, 3 physicians, 1 trip hammer and a variety of other shops, and about 50 families. Half a mile south of this is a village containing a store, tannery, woollen factory, clothing works, mills, &c. One mile still further south is a small village, containing a grist and saw mill, and several mechanics. The 4th village is a mile north of the Centre, and contains a tavern and several shops. The township is watered by Waterbury river and its several branches, which afford good mill privileges. Nearly all the town is capable of being made into good farms, and there is little

STRAFFORD.

land which is not suitable for cultivation. A considerable part of the surface is very level, and appears to be of alluvial formation. There are here some of the handsomest farms in the state, and they are surpassed by few in fertility. The township lies between the Mansfield mountains on the west and a range called the Hogback on the east, and contains no elevations of consequence. Among the minerals of this town may be mentioned iron ore, some small veins of copper, and steatite. There are in town 3 ministers, 5 attorneys, and 4 physicians, 13 school districts, a school for young ladies, 5 stores, 2 taverns, 2 tanneries, 1 woollen factory, 2 starch factories, 2 clothier's works, 2 grist and 7 saw mills. *Statistics of 1840.*—Horses, 371; cattle, 2,679; sheep, 7,484; swine, 1,011; wheat, bus. 2,636; barley, 37; oats, 9,241; rye, 262; Ind. corn, 5,337; potatoes, 75,957; hay, tons, 4,812; sugar, lbs. 31,150; wool, 16,628. Population, 1,371. W. H. H. B.

STRAFFORD, a post town in the south part of Orange county, is in lat. 43° 52' and long. 4° 39', and is bounded north by Vershire, east by Thetford, south by Sharon, and west by Tunbridge. It lies 30 miles southeast from Montpelier, the same distance north from Windsor, and was chartered Aug. 12, 1761, containing 24,325 acres. The settlement of this township was commenced just before the revolutionary war. The first town meeting on record was on the 18th of March, 1779, and David Chamberlain was town clerk. Several of the early settlers became tories, left the country, and their property was confiscated. The first meeting house was built in town by the Baptists, in 1794, and the second in 1799. The Rev. Joab Young was the first settled minister. He was settled by the Universalists in 1799, and died in 1816. There are at present 4 meeting houses, one belonging to the Congregationalists, and the others union or free. The religious societies are the Baptist, Christian, Methodist, Congregationalist, and Universalist. Strafford contains two pleasant villages. The upper village has a post office bearing the name of the town, and is handsomely built around a triangular common, the dwelling houses, stores, shops, and a new church, forming the sides, and the round hill and old meeting house the base. The post office designation of the other, or lower village, is *South Strafford*. The surface is uneven, but the soil is generally good. It is watered by a principal branch of Ompompanoosuc river, which affords several good mill privileges, on which are erected a number of mills and other ma-

STRAFFORD.

STRAFFORD.

chinery. In the northeasterly part is a pond covering about 100 acres, called Po-dunk pond, which is a place of considerable resort for amusement and angling. In the southeast corner of this township is an extensive bed of the sulphuret of iron, from which immense quantities of copperas are manufactured. For the following account of the Strafford Copperas Works, I am indebted to the kindness of Justin S. Morrill, Esq.

Strafford Copperas Works. This establishment was formerly styled the Vermont Mineral Factory Company, but is now called the *Vermont Copperas Company*; the owners, residing chiefly in Boston, having united this with a mine they own in Shrewsbury. It is situated in the extreme southeastern corner of the town, on the east side of a hill which contains an inexhaustible *ridge* of the ore, or technically *sulphuret of iron*. This mass of solid rock, in appearance, is usually covered, with what miners call the *cap*, a petrifactive soil of various depths, in which roots, leaves, and limbs of trees, beech-nuts, hazle-nuts and acorns are often found turned into stone or iron. There are 2 factories, each about 267 ft. in length by 94 in width. These contain 8 vats made of lead, 10 ft. by 12 ft., 21 inches in depth and three fourths of an inch in thickness, used for boilers. Lead is the only metal that will endure the operation of the copperas liquor, and this requires constant repair. An unlimited quantity can be made; the facilities for manufacturing being perhaps unsurpassed in the world. The copperas made here is used by most of the manufactories in New England, and is sent to all parts of the United States. It is supposed to excel for dyeing purposes any copperas offered in market. The process of making is as follows. The ore is blasted from the bed by means of powder. It is then broken into pieces with sledges, and afterwards the miners assort and break it up still finer with hammers. It is then thrown into large heaps, where it ignites spontaneously, or fire is sometimes set to it to hasten the process. In this condition it generally burns for the space of two months; in that time the sulphur is converted into *sulphuric acid*, and unites itself with the iron, forming *sulphate of iron*, or copperas. The smoke gives to vegetation, and to all surrounding objects, a sterile and sickly appearance, but the health of the workmen is not affected. These heaps of pyrites, being now thoroughly pulverized by fire, are carried to places where water, from a fountain on the summit of the hill, is made to run upon and leach this mass of crude

sulphate of iron. The lye is now drawn off into large wooden reservoirs, and thence into the leaden vats as fast as wanted. In these vats the lye or liquor is boiled to a certain strength, tested by acidimeters, and then drained off into wooden vats, where it remains to crystallize. Branches of trees were formerly thrown in for the crystals to adhere to; but Mr. Reynolds, the present *agent*, has made an improvement. Pieces of joist 3 inches square, 6 ft. long, laid across the top of the vats, with holes bored, and round sticks 18 inches long by $\frac{1}{4}$ of an inch in diameter, inserted at intervals of about 6 inches, are now used with great advantage. This makes a great saving of labor, although it has in some measure destroyed the fanciful shapes which the crystals formerly assumed upon some favorite branch—and the poet, had he been born on copperas-hill, would have written, “as the twig is bent the copperas is inclined.” The crystals are multangular, and of a beautiful transparent green color. These twigs, with specimens varnished, may be seen in the cabinets of many scientific gentlemen in various parts of the country. After crystallization takes place the liquor is drained off, and the copperas is shoveled into the packing rooms. When dry it is usually put into casks holding about half a ton each, but frequently into casks of every size.

The mine was discovered in 1793, by two men who were tapping sap-trees. Tradition says they discovered a spontaneous combustion among the leaves, but it is more probable that they found copperas in some wet spot spontaneously formed. The works were first commenced by Mr. Eastman, but were not successfully prosecuted until within about 30 years, when the stock was taken up in Boston, by the Messrs. Reynolds and the late energetic Col. Binney. President *Monroe* visited the works in his tour in the summer of 1817. In 1827 the company employed from 30 to 40 hands to make about the same quantity of copperas they now make with ten hands. The present year they have made *one thousand tons*. This, at the present market price, \$2.00 per cwt., amounts to \$40,000. Of this sum they pay out about \$10,000 for freight. They use 1,500 cords of wood annually, though they formerly used more. For many years the business was continued under great discouragements, and at a loss. The stock is now valuable. In 1824 the duty on copperas was fixed at two cents per pound. The price was then \$3.00 per cwt. The British establishments sent over large quantities in

STRATTON.

SUDBURY.

SUNDERLAND.

vessels, serving for ballast, hoping to glut the market and break down all American capital engaged in the business. But the tariff has protected the manufacturer until Yankee enterprise is nearly able to compete with the low priced labor of Europe. The company now sell the article for two cents per pound, after transporting it hundreds of miles. Smoky quartz, hornblende, garnet, &c., are found at the mines. Sulphuret of copper being also found in considerable quantities, in connexion with the sulphuret of iron, or copperas ore, attempts have been made to work it for the copper. In 1829 a large furnace was erected, and for several years the business was carried on extensively, and large quantities of copper were produced, but the expenditures were such that it was not found to be profitable, and in 1839 the business was finally abandoned.*

Strafford is divided into 13 school districts, with 623 scholars, and it is a curious fact that in 1810, with a less population, the number of scholars was 810. There are in town 3 stores, 2 grist and 9 saw mills. *Statistics of 1840.*—Horses, 340; cattle, 2,235; sheep, 12,182; swine, 1,095; wheat, bus. 4,382; barley, 166; oats, 8,460; rye, 293; buckwheat, 875; Ind. corn, 6,640; potatoes, 51,634; hay, tons, 4,909; sugar, lbs. 28,485; wool, 13,550. Population, 1,761.

STRATTON, a township in the western part of Windham county, is in lat. 43° 3' and long. 4° 8', and is bounded north by Winhall, east by Jamaica and Wardsborough, south by Somerset and west by Sunderland. It lies 18 miles northeast from Bennington and 22 northwest from Brattleborough. This township was settled principally by emigrants from Massachusetts. Among the early settlers were several families by the name of Morsman and Patch. There are two religious societies, the Congregational and Baptist. A meeting house was built here about the year 1809, which is occupied by both denominations. Bald mountain branch of West river rises in the eastern part, on which are erected a saw and grist mill, the only mills in town. Deerfield river rises in the western part, and runs south into Somerset. There are two natural ponds; one in the south part called Holman's pond, and the other in the northwestern part, called Jones' pond. They cover about 100 acres each. The waters of the former are discharged to the south into Deerfield river, and those of the latter to the north into Winhall river.

* We received from Mr. Morrill a particular account of the process of obtaining the copper from the ore, and we regret that we are obliged to omit it for the want of room.

There are in town 5 school districts. *Statistics of 1840.*—Horses, 49; cattle, 534; sheep, 694; swine, 159; wheat, bus. 169; barley, 5; oats, 543; rye, 407; buckwheat, 405; Indian corn, 141; potatoes, 942; hay, tons, 837; sugar, lbs. 2,672; wool, 1,637. Population, 341.

STRATTON GORE. Annexed to Stratton.

SUDBURY, a post town in the north part of Rutland county, is in lat. 43° 47', and long. 3° 54', and is bounded north by Whiting, east by Brandon, south by Hubbardton, and west by Orwell, and a part of Benson. It lies 47 miles south from Burlington, 65 north from Bennington, and 43 southwest from Montpelier. It was chartered August 6th, 1761, containing 13,426 acres. The early settlers of this township were generally from Connecticut. The religious denominations are Congregationalists and Methodists. The Rev. Silas Parsons was settled over the Congregational church in Jan. 1806, and was dismissed in 1815. The Rev. Mason Knapen, was settled in 1819, and dismissed in 1830; the Reverend John Thompson, was settled in 1833, and dismissed Feb. 18, 1838. This church consists of about 45 members. They erected a meeting-house about the year 1805. Of the Methodist society, we have no particulars. Otter creek touches upon the eastern border of this township. The other streams are small. Hubbardton pond extends into the south part, and there are in town several smaller ponds, of which Hinkum pond is the most considerable. On the outlet of this pond, which falls into Otter creek, is one saw mill, and on the outlet of another pond, which is the source of Hubbardton river, is another saw mill. The surface is uneven, and a high ridge of land extends through the township near the centre from south to north. The soil is generally a rich loam. The timber is principally pine, beach and maple. There is a small village in the westerly part of the township, containing a meeting-house, a store, a tavern, and a number of dwelling houses. The town contains 7 school districts and school houses, 2 saw mills, 2 stores, 2 taverns, 2 tanneries. *Statistics of 1840.*—Horses, 174; cattle, 954; sheep 11,653; swine, 511; wheat, bush. 1,488; oats, 2,662; rye, 2,156; buckwheat, 204; Indian corn, 3,890; potatoes, 13,315; hay, tons, 3,009; sugar, lbs. 550; wool, 24,718. Population, 796.

SUNDERLAND, a post town in the eastern part of Bennington county, is in lat. 43° 4', and long. 3° 59', and is bounded north by Manchester, east by Stratton, south by Glastenbury, and west by Arlington. It

SUNDERLAND.

SUTTON.

lies 15 miles northeast from Bennington, 87 southwesterly from Montpelier, and was chartered July 30, 1761, containing 23,040 acres. The settlement of the township was commenced in 1766, by Messrs. Brownson, Bradley, Warrens, Evarts, Chipman and Webb, emigrants from Connecticut. The town was organized in 1769, and Gen. Gideon Brownson was first town clerk. Joseph Bradley, Esq. was representative to the first Legislature, and Col. Timothy Brownson was one of the first councillors. The religious denominations are, Congregationalists, and Methodists. The Rev. Chauncey Lee was the first settled minister. He was settled over the Congregational church in 1786, and dismissed in 1795. They have a meeting-house situated in the northwest part of the township. The Battenkill river passes through the northwestern part in a southwesterly direction. On this stream are some fine alluvial flats, which are overflowed every spring. Roaring branch originates in several large ponds in the eastern part of the town, and running westerly, unites with the Battenkill, in Arlington.* On this stream are several excellent situations for mills and

* We had intended to insert entire in this place the account furnished by Mr. T. M. Bradley, of Williston, of two children, who were lost in the woods near this branch in 1780, but we are obliged to omit it for want of room. We will however briefly state the principal facts.—On the 31st May, 1780, two daughters of Eldad Taylor, of Sunderland, Keziah, aged 7, and Betsey, aged 4 years, wandered into the woods. Not returning, the parents became alarmed and commenced a search, which, with the aid of a few neighbors, was continued through the night without success. The next day the search was continued by large numbers from this and the neighboring towns, and was continued till the middle of the afternoon of the third day, when it was relinquished, and the people who had been out, collected together with the view of returning to their homes. Among those was one who thought the search should not be abandoned and this was ERMAN ALLEN. He mounted a stump, and soon all eyes were fixed upon him. In his laconic manner, he pointed to the father and mother of the lost children—now petrified with grief and despair—bade each individual present, and especially those who were parents, to make the case of these parents his own, and then say whether they could go contentedly to their homes without making one further effort to save those dear little ones, who were, probably, now alive, but perishing with hunger, and spending their last strength in crying to father and mother to give them something to eat. As he spoke his giant frame was agitated and the tears rolled down his cheeks, and in the assembly of several hundred men, but few eyes were dry. "I'll go, I'll go"—was at length heard from every part of the crowd. They betook themselves to the woods and before night the lost children were restored in safety to the arms of the distracted parents. It appeared that the first night they laid down at the foot of a large tree, and the second they spent upon a large rock. They obtained plenty of drink from the stream, but were very weak for the want of food. They, however, both survived, and Betsey, the younger, is now, (July, 1849), the wife of Captain John Munson, of Williston. The elder was the wife of John Jones, and died some years ago at Williston.

other machinery. The soil consists of alluvion, loam and marl. Near the foot of the Green Mountains the sulphate of iron is found in considerable quantities. On the side of the mountain a vein of lead ore has been discovered in granular limestone. Specimens of the ore have been analyzed, which yielded 60 or 70 per cent. of pure lead, and two or three per cent. of silver. The town contains 5 school districts, with a school house in each, 1 grist and 6 saw mills, 1 store, 1 tavern, 1 tannery and 1 woollen factory. *Statistics of 1840.*—Horses, 79; cattle, 467; sheep, 1,475; swine, 198; wheat, bush. 125; oats, 3,506; rye, 952; b. wheat, 545; In. corn, 1,861; potatoes, 7,804; hay, tons, 1,232; sugar, lbs. 5,577; wool, 4,349. Population, 437.

SUTTON, a post town in the north part of Caledonia county, is in lat. 44° 38' and long. 4° 56', and is bounded northeasterly by Westmore, and a part of Newark, east by Burke, south by Lyndon and west by Sheffield. It lies 38 miles northeast from Montpelier, and 13 north from Danville. It was chartered by the name of Billymead, February 6, 1782, to Jonathan Arnold and associates, and contains 23,040 acres. In 1812 the name was altered to Sutton. The settlement of the township was commenced about the year 1791, by a Mr. Hacket, who was soon after joined by other families from Rhode Island and Connecticut. The religious denominations are Methodists, Baptists, and Free-will Baptists. Elder Amos Beckwith was ordained over the Baptist church in 1804. A meeting house was erected here in 1813. This town has been generally healthy. The epidemic of 1812, commenced about the 10th of February of that year. In the space of seven weeks there were about 60 cases of the disease and six deaths. The town is watered by two considerable branches, which unite near the south line of Burke, and join the Passumpsic river in Lyndon. There are several ponds, of which Fish pond is the largest, and it lies in the northwest corner. It covers about 200 acres and discharges its waters into Barton river. The surface of the township is generally even, and considerable tracts of it is so low and wet as to be incapable of cultivation. There are several bogs of marl in this township. The town is divided into 7 school districts, and contains several mills and other machinery. *Statistics of 1840.*—Horses, 280; cattle, 1,569; sheep, 3,994; swine, 1,145; wheat, bush. 2,876; barley, 1,166; oats, 13,538; rye, 49; b'k wheat, 2,126; Ind. corn, 1,372; potatoes, 61,175; hay, tons, 3,088; sugar, lbs.

SWANTON.

THERFORD.

85,430; wool, lbs. 7,755. Population, 1,068.

SWANTON, a post town in Franklin county, is in lat. $44^{\circ} 53'$ and long. $3^{\circ} 54'$, and is bounded north by Highgate, east by Sheldon and Fairfield, south by St. Albans and west by lake Champlain, which separates it from Alburgh and North Hero. It lies 30 miles north from Burlington, and 50 northwest from Montpelier, and was chartered October 17, 1763, containing 23,040 acres. November 3, 1836, all that part of Highgate, lying west of Missisco river, was annexed to this township. Before the conquest of Canada by the English, the French and Indians had a settlement at Swanton Falls, consisting of about 50 huts, and had cleared some land on which they raised corn and vegetables. They had also built a church and a saw mill, and the channel cut through the rocks to supply water for the latter, still remains. This place was occupied by the Indians till the commencement of the revolution. The first permanent settlers here were John Hilliker and family, about the year 1787. They were soon joined by other settlers, and, in 1790, the town was organized and Thomas Butterfield was chosen town clerk. There are five religious denominations in this township, viz. Congregationalists, Baptists, Methodists, Episcopalians, and Friends. The Congregational church was organized January 4, 1800. This church depended upon missionary labors and stated supplies up to January 13, 1825, when the Rev. Eben H. Dorman, the present minister, was settled. The church now consists of about 100 members. The present minister of the Baptist church is the Rev. Daniel Sabin. There are two houses for public worship; one erected in 1816 and 17, belonging to the Congregationalists, and Baptists, and the other in 1822 and 23 belonging to the Congregationalists, Episcopalians, Methodists and Friends. The most remarkable instance of longevity, is that of Walter Scott, who died here in 1815, aged 110 years. Missisco river runs through the township, fertilizing a considerable tract of intervale along its course. At the distance of six miles from its mouth is a fall of about 20 feet, affording a number of very valuable mill privileges. The river is navigable from this fall to the lake for vessels of 50 tons burthen. McQuam creek, which flows from Missisco river into the lake, several miles south of the principal mouth of the river, forms a delta called Hog Island, which belongs to this town. Besides these there are several small streams which flow in

different directions. Along the river the land is low and moist. Further back it becomes more elevated, dry and sandy, and is timbered principally with pine. In the southern part the soil is gravelly and timbered with hard wood. The north-western part is marshy, and during the summer season is the favorite resort of wild ducks, geese, cranes and other waterfowl. Bog iron ore of an excellent quality is found in the north part of the township. As yet but little of it has been wrought here, but large quantities have been transported and wrought at the furnaces in Sheldon, Highgate and Vergennes. Marble, also, of a fine quality is found here in abundance. It covers an area of more than 300 acres, and extends to an unknown depth. It is generally found at the distance of from two to eight feet below the surface. It is detached from its original bed in large blocks by blasting, and these are conveyed about half a mile to the mills at Swanton falls. Here they are sawn into slabs or pieces of any required dimensions. The marble is of a beautiful black, or light blue cloudy color, according to the quarries from which it is taken. It is manufactured into various forms and articles, which are transported by water to Albany, New York and other markets. There are 3 post offices, designated as Swanton Falls, Swanton Centre and East Swanton. At Swanton Falls is a flourishing village situated on both sides of Missisco river, 6 miles from its mouth, but only 1 mile from the lake in a direct line. It contains a meeting house, 2 school houses, 3 taverns, 5 stores, 1 grist mill and 4 saw mills, 1 woollen factory, mills for the manufacture of marble, and about 75 dwelling houses. The ground on which the village is situated, is elevated, pleasant and healthy. There are in town 16 schools, 8 stores, 2 tanneries, besides the mills and other machinery. *Statistics of 1840.* Horses, 443; cattle, 2,000; sheep, 11,000; swine, 1,206; wheat, bush. 4,290; oats, 11,275; rye, 1,388; buck-wheat, 807; Ind. corn, 7,184; potatoes, 46,264; hay, tons, 4,920; sugar, lbs. 10,474; wool, 22,759. Population, 2,313.

THERFORD, a post town in the southeast corner of Orange county, is in lat. $43^{\circ} 50'$ and long. $4^{\circ} 43'$, and is bounded north by Fairlee and West Fairlee, east by Connecticut river, which separates it from Lyme, N.H., south by Norwich, and west by Strafford. It lies 34 miles southeast from Montpelier, 28 northeasterly from Windsor, and was chartered Aug. 12, 1761, containing 26,260 acres. The settlement was commenced here in 1764

THETFORD.

TINMOUTH.

by John Chamberlain, from Hebron, Ct. The next year he was joined by two other families, one by the name of Baldwin, and the other by the name of Hosford. Samuel, the son of John Chamberlain was the first English child born in town. John Chamberlain was nick-named *Quail John*. Being industrious and somewhat parsimonious, he accumulated considerable property, and his fame has been perpetuated in the following stanza.

"Old Quail John was the first that came on,
As poor as a calf in the spring;
But now he is rich as Governor Fitch,*
And lives like a lord or a king."

The first meeting of the proprietors held in this township, was at the house of Abner Chamberlain, May 10, 1768. The town was not organized till 1768, and Abner Howard was the first town clerk. The Congregationalists are the most numerous denomination of Christians. Their first settled minister was the Rev. Clement Sumner. He graduated at Yale College in 1758, settled at Keene June 11th, 1761, was dismissed April 30, 1772, and installed at Thetford in 1773. He became a tory at the commencement of the war, went to Swanzey, N. H., where he became a Universalist preacher, and continued such till his death. From the time of Sumner's leaving Thetford till the arrival of Dr. Asa Burton, in 1778, the church was without a pastor. Dr. Burton was born at Stonington, Ct., August 25, 1752, came to Norwich with his father in 1766, graduated at Dartmouth College in 1777, read divinity with Pres. Wheelock, commenced preaching at Thetford in 1778, was ordained there in Jan., 1779, and continued there till his death, on the 1st of May, 1836, at the age of 84 years. The Congregational society has a meeting house situated in a village near the centre of the township. There has been a Baptist church organized here, but it is small. This township is watered by Ompompanoosuc river, which runs through it in a southeasterly direction, and by a large branch, which rises in Strafford and unites with the Ompompanoosuc in the south part of the township. Both these streams afford fine mill privileges. About half of Fairlee lake lies in the north part of the township, and there are several smaller ponds. One of these covers about nine acres, and is situated in the eastern part, about four rods from the west bank of Connecticut river, which is in this place more than 100 feet above the level of the river. It is fed by no stream, nor is there any stream issuing from it. It is

* Allusion is here made to the Governor of Connecticut.

very deep, and in summer falls 2 or 3 feet. It contains large quantities of perch and other fish. The road passes between the pond and the river. A small vein of galena, or the sulphuret of lead, has been discovered here. The mine is situated about 100 rods northeasterly from the meeting house, on the south side of a hill. The surface of Thetford is uneven, and in some parts rocky. There are in town three small villages, two of which are situated on the Ompompanoosuc, and the other near the centre of the township. The latter is the most important, and contains a meeting house, an academy, a tavern, several stores, and a number of handsome dwelling houses. Thetford Academy was incorporated and established here in 1819. The average number of scholars is from 40 to 50. There are in town 17 school districts, a small woollen factory, &c. *Statistics of 1840.*—Horses, 476; cattle, 2,256; sheep, 13,604; swine, 1,351; wheat, bus. 3,635; barley, 1,020; oats, 19,710; rye, 2,499; buckwheat, 2,289; Ind. corn, 15,628; potatoes, 58,957; hay, tons, 4,978; sugar, lbs. 21,288; wool, 25,798. Population, 2,065.

TINMOUTH, a post town in the central part of Rutland county, is in lat. 43° 27' and long. 74° 2', and is bounded north by Clarendon and Ira, east by Wallingford, south by Danby, and west by Wells and Middletown. It lies 41 miles north from Bennington, eight south from Rutland, and was chartered September 15, 1761, to Joseph Hooker and others, containing, originally, 23,040 acres. Its size has since been reduced, by contributing to neighboring townships, about one third. The settlement was commenced here about the year 1770. Among the first settlers were Thomas Peck and John McNeal. This town was organized March 11, 1777, and Charles Brewster was the first town clerk. On the 17th of February of this year the inhabitants of Tinmouth had a meeting and "voted not to raise money towards paying Seth Warner's regiment." Soon after, the following oath of allegiance was imposed upon the freemen of this town. "You each of you swear, by the living God, that you believe for yourselves, that the King of Great Britain hath not any right to command, or authority in or over the States of America, and that you do not hold yourselves bound to yield any allegiance or obedience to him within the same, and that you will, to the utmost of your power, maintain and defend the freedom, independence and privileges of the United States of America, against all open enemies, or traitors, or conspirators whatsoever; so help you God." The

TINMOUTH.

Congregational church, which was for many years the only church in town, was organized in 1780, and has had the following settled ministers: the Rev. Benj. Osborn from Sept. 25, 1780, to Oct. 11, 1787; Rev. William Boies from Feb. 28, 1804, to July 15, 1818; Rev. Stephen Martindale from Jan. 6, 1819, to Feb. 6, 1832, and the Rev. Rufus C. Clapp, the present minister, since Sept. 18, 1839. Between 1832 and 1839 the Rev. Stephen Williams labored here more than 4 years. This church consists at present of 57 members. An Episcopal church, by the name of *St. Stephen's Church*, is organized here, and now consists of 16 members, but has no settled minister. There are some Methodists here, who have preaching a part of the time. There is no meeting house excepting that belonging to the Congregationalists, which is a neat, convenient building, erected in 1836. The situation of the town is elevated and healthy. Mrs. Abigail Carpenter died here in Jan., 1817, aged 100 years and 6 months. The Hon. Thomas Porter lived here from 1779 to about 1832, and died at Granville, N. Y., in May, 1833, aged 99 years and 3 months. Mrs. Rossetter and Mrs. Dean died here in 1820, aged about 93, and the Hon. Nath'l Chipman is still living here at the age of 90. The epidemic of 1813 was very mortal. Furnace brook, or Little West river, rises from a small pond in the south part of the township, and runs nearly north through Clarendon, and unites with Otter creek in Rutland. A dam was formerly erected on this stream, near the north line of the town, which caused the water to flow back for the distance of three miles, and the pond was, in some places, half a mile in width. In this pond the fish multiplied and became remarkably numerous and large. About the year 1815, this dam was taken away, and the furnace, which stood upon it, was removed further up the stream near the centre of the township, where it was in operation till 1837, when it ceased. Poultney river waters the western part. There are two ranges of hills or mountains extending through the township from south to north, one on each side of Furnace brook. Several quarries of fine marble have been opened, and iron ore is found in abundance in several places. The town contains 6 school districts, besides forming parts of three more with adjoining towns, 3 saw mills, 1 store, 1 tavern and 1 tannery. *Statistics of 1840.*—Horses, 179; cattle, 2,059; sheep, 5,215; swine, 589; wheat, bush. 1,441; oats, 7,555; rye, 3,363; Ind. corn, 2,824; potatoes, 10,750; hay, tons, 3,187;

TOPSHAM.

sugar, lbs. 19,555; wool, 10,759. Population, 781.

TOMLINSON. Name altered to Grafton, October 31, 1791. *See Grafton.*

TOPSHAM, a post town in the north part of Orange county, is in lat. 44° 8' and long. 4° 45', and is bounded north by Groton, east by Newbury, south by Corinth, and west by Orange. It lies 19 miles southeast from Montpelier, and 47 north from Windsor. It was chartered June 17, 1763. The settlement was commenced about the year 1781, by Thomas Chamberlain, Thomas McKeith and Samuel Farnum. In 1783 they were joined by Robert Mann, Samuel Thompson and John Crown; and, in 1784, by Lemuel Tabor. The first settlers were generally from New Hampshire. Lemuel Tabor built the first saw mill here in 1784, and the first grist mill in 1787. The town was organized March 15, 1790, and Lemuel Tabor was the first town clerk, which office he held 33 out of the 34 succeeding years. It was first represented in the general assembly, in 1801, by William Thompson. The religious denominations are Congregationalists, Freewill Baptists, Baptists, Universalists and Methodists. The Rev. Stillman Morgan is minister of the Congregational church, Elders William and Eber Sanborn of the Baptist, and Elder A. Shipman of the Freewill Baptist. A town house, which has been occupied as a meeting house, was erected here in 1806. The township is watered principally by the head branches of Wait's river, several of which are considerable mill streams. The surface is very uneven, and much of it stony. The rocks are principally granite. The timber is maple, beech, birch, spruce and hemlock. There are in town 17 school districts and school houses, 7 saw, 2 fulling and 4 grist mills, 1 carding machine, 2 stores, and 3 tanneries. *Statistics of 1840.*—Horses, 350; cattle, 2,591; sheep, 6,111; swine, 1,457; wheat, bus. 5,576; barley, 470; oats, 18,215; rye, 164; buckwheat, 487; Ind. corn, 5,653; potatoes, 63,179; hay, tons, 4,294; sugar, lbs. 31,645; wool, 8,961. Population, 1,745.

TOWNSHEND, a post town in the central part of Windham county, is in lat. 43° 3' and long. 4° 24', and is bounded north by Grafton and Athens, east by Athens and Brookline, south by Newfane, and west by Windham, Jamaica and Wardsboro'. It lies 28 miles northeast from Bennington, and 12 northwesterly from Brattleborough; and was chartered June 20, 1753, containing, originally, about 23,000 acres. In 1840 the town of Acton was annexed to it. The first settlement was

TOWNSHEND.

TOWNSHEND.

TROUT RIVER.

TROY.

commenced in 1761, by Joseph Tyler, who was soon joined by John Hazletine, whose mother lived to the age of 104 years, and others, from Upton, Ms. The first town meeting was on the 30th of May, 1771. Joseph Tyler was the first town clerk. The religious denominations are Congregationalists, Baptists, Methodists and Universalists. The Rev. Mr. Dudley was the first settled minister. He was ordained over the Congregational church June 26, 1777, and dismissed about the year 1780. This church, having become extinct, was reorganized in 1792, and then consisted of 15 members. The ministers since that time have been the following: Rev. Luke Whitcomb from Aug. 30, 1815 to his death, Jan. 2, 1821; Rev. Philetus Clark from Nov. 21, 1821, to July 6, 1824; Rev. James Kimball from Jan. 13, 1825, to Oct. 6, 1830; and Rev. Horatio N. Graves, the present minister, who was settled Feb. 3, 1833. The present minister of the Baptist church is the Rev. Wm. D. Upham, who has been settled here 3 or 4 years. There are two villages, whose post office designations are Townshend and West Townshend. The former is a flourishing village, containing a Baptist and Congregational meeting house, the former built in 1838, the latter in 1790, 3 stores, a number of mechanics' shops, and about 40 dwelling houses. The Leland Classical and English School is located here. It is a flourishing institution. The building is of brick, 54 feet by 36, together with a large boarding house for the accommodation of the pupils. In the west village is a meeting house, built in 1816, but no settled minister. There are now living in this township two persons who are between 90 and 100 years of age. Among the early and distinguished inhabitants of this township may be mentioned the late Gen. Samuel Fletcher. He was born at Grafton, Mass., in 1745. At the age of 17 he enlisted as a soldier in the contest between the British and French colonies, in which service he continued one year. On his return he learned the trade of a blacksmith, which he followed about four years, when he married a young lady with a handsome property, and, resigning the sledge, removed to Townshend to wield the axe among the trees of the forest. In 1775 he joined the American standard at Bunker's hill, with rank of orderly sergeant. He returned to Townshend in January following, where he was made a captain of militia. He was, at this time, principal leader in the county convention, and was ordered, as captain, to raise as many minute men as possible in his vi-

cinity, who were to hold themselves in readiness to march at the beat of the drum. His whole company volunteered, and in 1777, they marched to Ticonderoga for the purpose of relieving the American army, which was there besieged. On this expedition, with 13 volunteers, he attacked a British detachment of 40 men, killed one and took seven prisoners, without sustaining any loss himself. He soon after received a Major's commission, and continued in the service till after the capture of Burgoyne. After his return, he rose through the different grades of office to that of Major General of militia, which office he held six years. He was several years member of the executive council, and, in 1788, was appointed high sheriff of the county of Windham, which office he held 18 years successively, and he was three years a judge of the county court. He died September 15, 1814, aged about 70 years. The surface of this township is generally uneven, and many of the hills are high and steep. West river runs through the township in a southeasterly direction. It is a very rapid stream, and is about ten rods in width. Along its banks are some fine tracts of intervale. There are also several brooks, which afford good mill seats. The town contains 9 school districts and school houses, 2 grist, 1 fulling and 4 saw mills, 4 stores, 2 taverns, 1 trip hammer, and 2 tanneries. *Statistics of 1840.*—Horses, 326; cattle, 2,669; sheep, 8,890; swine, 1,055; wheat, bus. 2,025; barley, 116; oats, 8,936; rye, 1,823; buckwheat, 893; Indian corn, 7,946; potatoes, 41,488; hay, tons, 4,178; sugar, lbs. 10,460; wool, 17,276. Population, 1,515.

TROUT RIVER, is formed in Montgomery, by the union of south and east branch, the former rising in Avery's gore, and the latter in Westfield. The junction is formed about half a mile west of the centre of the town, from which the river takes a northwest course, and, after running about four miles, passes through the northeast corner of Enosburgh, into Missisco river near the south line of Berkshire. Trout river receives, in its course, a number of tributary streams, affords several valuable mill privileges, and fertilizes a handsome tract of intervale. The Rev. Mr. Gray, an Episcopalian clergyman, was drowned in attempting to cross this river to attend a funeral, during a remarkable freshet in the fall of 1822. He was a man respected and beloved, and his loss was much lamented.

TROY, a post town in the north part of Orleans county, is in lat. 44° 55' and long.

TROY.

TUNBRIDGE.

4° 36', and is bounded north by Potton, Can., east by Newport, south by Lowell, and west by Westfield and Jay. It lies 47 miles northeasterly from Montpelier. This township is eleven miles and a half long from north to south. The length of the north line is nearly five miles, and that of the south nearly two, and the township contains about 23,000 acres. This township was granted in two separate gores. The south part was chartered to John Kelley, Oct. 13, 1792, and the north half to Samuel Avery. The settlement was commenced about the year 1800, by emigrants from different towns on Connecticut river. During the late war with Great Britain, most of the inhabitants left the town. A part of them, however, returned after the war, and the settlement has since advanced with considerable rapidity. The town was organized March 30, 1802, and was then called Missisco. Curtis Elkins was the first town clerk. This township is well watered by Missisco river, which runs through it near the western border from south to north, and by several of its tributaries. The falls, on the Missisco, in the north part, are a considerable curiosity. Here the river precipitates itself down a ledge of rocks about 70 feet. These falls and the deep still water below, present a grand and interesting spectacle, when viewed from a rock, which projects over them, 120 feet in perpendicular height. The soil is in general a strong loam, suitable for grass and most kinds of grain. The surface is generally level, and along the river are tracts of intervals of considerable extent and fertility. The principal rocks are chlorite and mica slate, serpentine, limestone and steatite. About 10 years ago an immense mass of iron ore of an excellent quality was discovered in this town a short distance to the eastward of Missisco river. A furnace and forge have been erected, which produce annually about 400 tons of cast iron, and several tons of wrought iron. The quantity of ore is inexhaustible. The timber is mostly maple, birch, beech, spruce and hemlock, with some pine. There are here 3 post offices, denominated Troy, North Troy, and Troy Furnace, around each of which is a small village. The town contains 8 schools, 4 saw, 3 grist and 2 fulling mills, 4 stores. *Statistics of 1840.*—Horses, 195; cattle, 1,066; sheep, 2,995; swine, 632; wheat, bus. 923; barley, 132; oats, 6,592; rye, 511; buckwheat, 1,336; Ind. corn, 1,886; potatoes, 30,880; hay, tons, 2,192; sugar, lbs. 19,066; wool, 5,944. Population, 816.

TUNBRIDGE, a post town in the south

part of Orange county, is in lat. 43° 54' and long. 4° 32', and is bounded north by Chelsea, east by Strafford, south by Royalton, and west by Randolph. It lies 30 miles north from Windsor, and 26 south-east from Montpelier. It was chartered Sept. 3, 1761, to Abraham Root, Obadiah Noble, and others, containing 23,040 acres. The settlement of the township was commenced about the year 1776, by James Lyon, Moses Ordway and others, emigrants from New-Hampshire. James Lyon, jr., was born January 25, 1780, and was the first child born in town. The Indians passed through the township, at the time they visited Royalton, and took one or two prisoners here. The town was organized in March, 1786, and A. Stedman was first town clerk. The town was first represented in 1787, by Seth Austin, who was also the first captain of militia and the first justice of the peace. About this time the ingress of inhabitants was so great that grain could not be procured for their support, and they were reduced almost to a state of starvation. Since that time the inhabitants have been generally blessed with a competency. The religious denominations are Congregationalists, Freewill Baptists, Methodists and Universalists. The first settled minister was the Rev. David H. Williston. He was ordained over the Congregational church, June 26, 1793, and dismissed in 1802. The Rev. Jacob Allen September, 1813, and dismissed in 1821. The Rev. Joseph Thatcher, the present minister was settled in April 1838. The Congregational church was organized Feb. 5, 1792. In 1836 and 7 the society built a new meeting house, which was dedicated June 14, 1837. April 19, 1838, this building was consumed by fire. A new house was, however, immediately erected which was dedicated July 25, 1839. This church consists of 52 members. The Methodists have a good brick meeting house at the lower village, built in 1833. The Freewill Baptists have one in the easterly part of the town built in 1808. Their minister is the Rev. Geo. Hackett. A union house was finished at the upper village in 1840. The meeting house near the centre was built in 1797, and is now principally used as a town house. There are three small villages situated on the first branch of White river, called the Centre, the Upper and Lower village, of which the Centre is largest, containing 1 meeting house, 2 stores, 1 tavern, 1 grist, 1 saw and 1 fulling mill, trip hammer &c., also 1 clergyman, 1 attorney and 1 physician. Among the instances of longevity may be mentioned

UNDERHILL.

VERGENNES.

that of Daniel Hunt, who died here aged 100 years, Daniel Hopkins, who died here in 1818, aged 100 years, and Mrs. Mary White, who died in 1822, aged 95 years. This town has never experienced any remarkable season of mortality. The township is watered by the first branch of White river, which runs through it from north to south, near the centre. There are, on this stream, several very good mill seats, which are already occupied. The soil is generally a deep, rich loam, and along the branch is some interval. The surface of the township is uneven, broken, and the elevations are abrupt. There is a medicinal spring in the western part of the township, the waters of which are impregnated with sulphuretted hydrogen. They have been considerably resorted to by persons afflicted with cutaneous complaints, and have been found beneficial. There are in town 5 meeting houses, 19 school districts, 2 grist 10 saw and 3 fulling mills, 2 carding machines, 4 stores, 1 tavern, 2 tanneries, 1 woollen factory, besides the usual mechanics. *Statistics of 1840.*—Horses, 376; cattle, 2,185; sheep, 8,890; swine, 1,345; wheat, bus. 3,310; barley, 175; oats, 13,305; rye, 655; buckwheat, 1,415; Indian corn, 7,620; potatoes, 67,705; hay, tons, 3,430; sugar, lbs. 31,670; wool, 18,905. Population, 1,811.

TURNERSBURGH. *See Chelsea.*

TYSON FURNACE. *See Plymouth.*

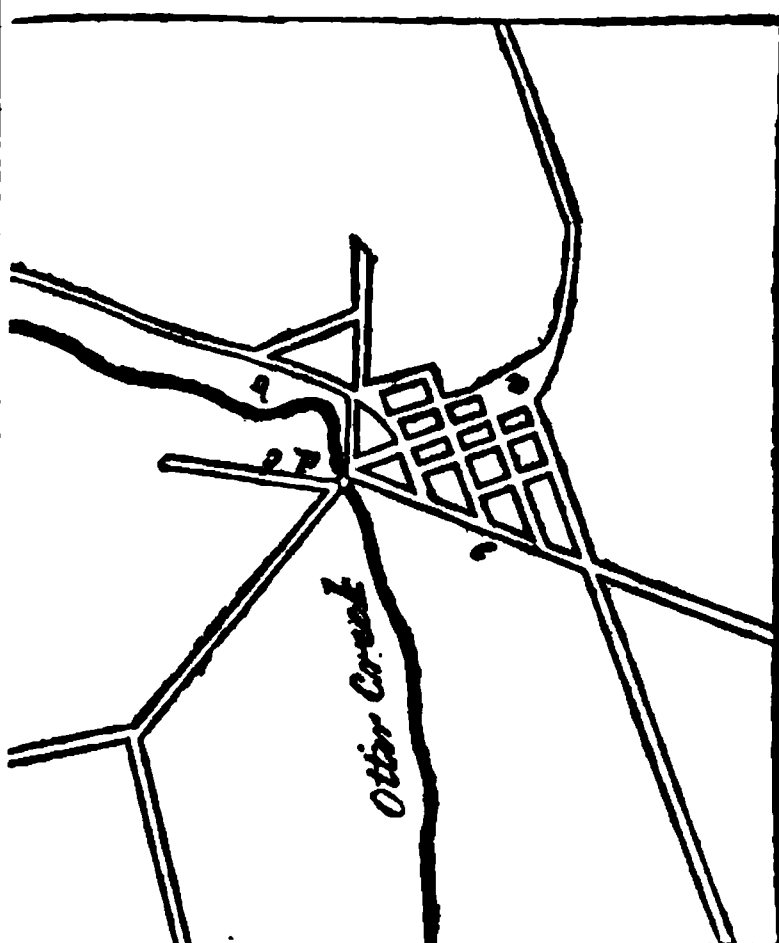
UNDERHILL, a post town in the northeastern part of Chittenden county, is in lat. $44^{\circ} 33'$ and long. $4^{\circ} 7'$, and is bounded northerly by Cambridge, easterly by Mansfield, southerly by Jericho, and westerly by Westford. It lies 15 miles northeast from Burlington, and 26 northwest from Montpelier. It was chartered June 8, 1763, to Joseph Sacket and others, containing 23,040 acres. In 1839 the western part of Mansfield was annexed to it. The settlement of the township was commenced about the year 1786, the first surveys having been made in 1785. The town was organized March 9, 1795, and William Barney was the first town clerk, and also the first representative, chosen the same year. The religious denominations are Congregationalists and Methodists. The Congregational church was organized in December, 1802. And they, in 1804, settled the Rev. James Parker, who was dismissed in 1812. The Rev. N. B. Dodge was settled in 1814, and dismissed in 1820. His successors have been the Rev. Messrs. Robinson, P. Kingsley, and John Adams. The latter is their present minister. They have 2 meeting houses. The surface of a large

portion of the township is very uneven. The timber is principally hard wood, interspersed with spruce and hemlock. The streams are all small. The most important are the head branches of Brown's river, which rise in the south part. The town contains 8 school districts and school houses, 10 saw mills, 2 stores and 1 tavern. *Statistics of 1840.*—Horses, 174; cattle, 1,089; sheep, 3,361; swine, 461; wheat, bu. 1,186; oats, 2,936; rye, 50; buckwheat, 310; Ind. corn, 1,954; potatoes, 30,375; hay, tons, 1,556; sugar, lbs. 30,827; wool, 8,010. Population, 1,441.

UNIVERSITY OF VERMONT. *See part second, page 144.*

VERGENNES, the only city in Vermont, is situated in lat. $44^{\circ} 10'$, and long. $3^{\circ} 43'$, and is bounded north and east by Ferrisburgh, south by Waltham, and west by Panton and Ferrisburgh. It lies at the head of navigation on Otter creek and was incorporated with city privileges October 23, 1783, being 480 by 400 rods in extent. The first meeting under its charter was held March 12, 1789, and Samuel Chipman, jun. Esq. was first clerk. Its first Mayor was Enoch Woodbridge, Esq. who was afterwards chief judge of the Supreme Court. He was chosen July 1, 1794, and the same year represented Vergennes in the General Assembly. In 1798, a large building was erected here for a state house, which has since been taken down. The first settlement within the present limits of Ver-

Ground plan of Vergennes.



a Episcopal church and Methodist chapel. p Congregational church. q Mills. q Champlain Arsenal. c Iron Foundries.

VERGENNES.

VERNON.

gennes, was made in 1766, by Donald M'Intosh, a native of Scotland, who was in the battle of Culloden. He came to this country with Gen. Wolfe's army during the French war, and died July 14 1803, aged 34 years. The emigrants, who subsequently located themselves here, were principally from Massachusetts, Connecticut and the south parts of this state. The Congregational church was formed Sept. 17, 1793. The Rev. Daniel C. Sanders was settled over it from June 12, 1794 to August 24, 1799; the Rev. John Hough from March 12, 1807 to August 28, 1812; the Rev. Alexander Lovell from Oct. 22, 1817 to Nov. 10, 1835, and the Rev. Harvey F. Leavitt, the present minister, was settled August 31, 1836. This society built a neat and commodious house of worship in 1834 which was dedicated Dec. 23 of that year. An Episcopal society was organized here in 1811, which was under the care of the Rev. Parker Adams for 2 or 3 years, but, having become nearly extinct, it was re-organized in January, 1832, by the name of *St. Paul's Church*. The society shortly after erected a neat church edifice, which was consecrated Jan. 18, 1835. The Rev. Charles Fay became rector of this church in 1833 and continued about three years, since which they have had the services successively of the Rev. Messrs. A. T. Twing, A. K. Putnam, Z. Thompson, N. W. Monroe and Mr. Greenleaf. Rev. H. M. Davis is the present minister. There is a respectable Methodist society here which has erected a neat house of worship the present year, (1842.) Vergennes has always been healthy, having suffered as little as almost any place of its size in the state, by sickness. Otter creek passes through this city, and at the falls here are some of the finest stands for mills in the country. At the head of the falls the stream is divided by two small islands into three channels, forming three distinct sets of falls of 37 feet. On these falls a very large amount of machinery was put in operation during the non-intercourse and war with Great Britain, which consisted of one blast furnace, one air furnace, eight forges, one rolling mill, one wire factory, besides grist, saw, and fulling mills, &c. During the war 177 tons of cannon shot were cast here for government. In June, 1816, most of the iron works were suspended and have since, only in part, been resumed. The creek is navigable to the foot of the falls here, a distance of seven miles, for the largest vessels on the lake. Its width varies from 14 to 20 rods. The channel is so crooked in many places as to

render the navigation difficult with the most favorable wind. To obviate this inconvenience it was contemplated to construct a tow path along the bank of the creek, by which the navigation might be greatly facilitated. The shore of this creek is very bold, and vessels of 300 tons burthen may receive and discharge their cargoes at almost any spot with the assistance of ten feet plank. The flotilla, commanded by the brave M'Donough, which captured the British fleet in Plattsburgh bay, on the 11th of September, 1814, was fitted up at this place. A United States Arsenal was erected here in 1828. (*See part second, page 128.*) There is no place in the state which affords greater facilities for ship building. Vergennes is surrounded by a rich, fertile country. Its trade has always been considerable, and is gradually increasing. There are regular lines of canal and steam-boats between this place and New York, and also between here and Buffalo, through the western canal. The city contains three houses for public worship, 6 attorneys, 3 physicians, 1 bank, 14 dry goods, grocery and apothecary stores, 1 book store, 2 iron foundries, 2 flour mills, 2 saw mills, 2 clothiers' works and 3 tanneries. *Statistics of 1840.*—Horses, 96; cattle, 388; sheep, 3,683; swine, 246; wheat, bus. 150; oats, 1,330; buckwheat, 50; Indian corn, 1,453; potatoes, 3,420; hay, tons, 1,284; wool, lbs. 9,900. Population, 1017.

VERNON, a small post town in Windham county, situated in the southeast corner of the state, is in lat. 42° 46' and long. 4° 28', and is bounded north by Brattleborough, east by Connecticut river, which separates it from Hinsdale, N. H., south by Northfield, Mass., and west by Guilford. It lies 35 miles nearly east from Bennington, and 50 south from Windsor. This township constituted a part of Hinsdale, N. H., which was chartered September 5, 1753, till Vermont became a separate state. It then became the township of Hinsdale in Vermont, which name was altered to Vernon, in 1802. This was one of the first settled townships in the state, but the precise time of its commencement is not known. The earliest inhabitants were emigrants from Northampton and Northfield, Mass. The inhabitants of this township encountered all the dangers and solicitudes of Indian wars, and struggled with all those difficulties and hardships which are incident to frontier settlements. Fort Dummer in Brattleborough, Hinsdale's fort in Hinsdale, and Bridgeman's fort in this township, were all insufficient to shield the inhabitants from the incursions of the

VERNON.

VERSHIRE.

VICTORY.

Indians. On the 24th of June, 1746, a party of 20 Indians came to Bridgeman's fort, attacked a number of men who were at work in a meadow, killed Wm. Robbins and James Parker, wounded M. Gilson and Patrick Roy, and made prisoners of Dan'l Howe and John Beeman. Howe killed one of the Indians before he was taken. In 1747, they burnt Bridgeman's fort, killed several persons and made others prisoners. On the 27th of July, 1755, the Indians ambushed Caleb Howe, Hilkiah Grout and Benjamin Gaffield, as they were returning from their labor in the field, and then proceeded to Bridgeman's fort, where they made prisoners of Mrs. Howe, Grout and Gaffield, with their children.* Startwell's fort was built here in 1740, and is now standing in the north part of the town, and has been till recently occupied as a dwelling house. It is probably the oldest house now standing in the state. The records of the town were accidentally burnt in 1797, and therefore the time of its organization cannot be ascertained. It was, however, before the revolution. The Hon. John Bridgeman, who has subsequently been, many years, a judge in this county, was the first town clerk, and the Hon. Jonathan Hunt, who was afterwards Lieut. Governor of the state, was the first representative. He died June 1, 1823, aged 85. The Baptists are the most numerous religious sect. A meeting house was erected here in 1802. Elder David Newman, a Baptist, has officiated a number of years. The Rev. Bunker Gay, a Congregationalist, was ordained over this town and Hinsdale, N. H., in 1764, and dismissed in 1802. The epidemic of 1813 was very distressing in this town. About one fifth of the inhabitants were afflicted with it, and about one thirtieth part died. There were 21 deaths, mostly of children and youth, in the course of a few weeks, and four died in the space of 24 hours. Doct. Cyrus Washburn was the first, and has ever since been the only regular physician in town. He has been in successful practice here about 40 years. The streams in this township are all small. White lily pond covers about 100 acres. A large proportion of the surface of the township is mountainous, and the soil is dry, stony and thin, except some small tracts of intervale along Connecticut river, which are very fertile. In the western part are some quarries of excellent slate. The original growth of timber, on the mountains, has long since been destroyed by fires, and a young and hand-

some growth of oak and chestnut has sprung up. Between the meadows and the hills is a considerable tract of pitch pine plain, which produces good crops of rye, when cultivated. The town contains 8 school districts, 2 grist mills, 4 saw mills, 1 tavern, and 1 store. *Statistics of 1840.*—Horses, 98; cattle, 686; sheep, 1,095; swine, 430; wheat, bus. 127; barley, 12; oats, 10,210; rye, 2,967; buckwheat, 280; Ind. corn, 8,910; potatoes, 7,955; hay, tons, 970; sugar, lbs. 300; wool, 1,965. Population, 705.

VERSHIRE, a township in the central part of Orange county, is in lat. 43° 57', and long. 4° 41', and is bounded north by Corinth, east by West Fairlee, south by Strafford, and west by Chelsea. It lies 25 miles southeast from Montpelier, and 35 north from Windsor. It was granted Nov. 7, 1780, and chartered Aug. 3, 1781, to Abner Sealy and others, containing 21,961 acres. The settlement was commenced in the year 1780. The town was organized in 1783. Andrew Peters was first town clerk and Ebenezer West was first representative. The religious denominations are Congregationalists, Baptists, Freewill Baptists, and Methodists. The Rev. Stephen Fuller, Congregationalist, and Rev. Ebenezer West, Baptist, were the first settled ministers. There are 3 meetinghouses, in the township, Congregational, Baptist and Freewill Baptist. It is watered by the head branches of Ompompanoosuc river, which are here small. The surface is very uneven, and in some parts stony. There are 12 school districts, 1 grist mill, 4 saw mills, 2 stores, and 1 tavern. *Statistics of 1840.*—Horses, 269; cattle, 1,928; sheep, 7,617; swine, 936; wheat, bus. 6,303; oats, 65,960; rye, 11; buckwheat, 197; Ind. corn, 3,533; potatoes, 65,915; hay, tons, 3,940; sugar, lbs. 35,375; wool, 14,194. Population, 1,998.

VICTORY, an unorganized town in the southwest part of Essex county, is in lat. 44° 32' and long. 5° 5', and is bounded northwesterly by Burke and a part of Kirby, northeasterly by Granby and a part of East Haven, southeast by Lunenburg and Concord, and southwest by Bradleyvale. It was granted November 6, 1780, and chartered Sept. 6, 1781, to Ebenezer Fisk and others, containing 23,040 acres. It is watered by Moose river, which runs through it from northeast to southwest. *Statistics of 1840.*—Horses, 17; cattle, 87; sheep, 102; swine, 55; wheat, bus. 200; barley, 72; oats, 160; rye, 30; buckwheat, 130; Ind. corn, 50; potatoes, 2,610; hay, tons, 123; sugar, lbs. 2,450; wool, 192. Population, 140.

See Part 2d, p. 66; also Gay's Narrative.

WAITSFIELD.

WAITSFIELD.

VINEYARD. *See Isle La Motte.*

VIRGIN HALL. *See Aikens' Gore.*

WAITSFIELD, a post town in the southwestern part of Washington county, is in lat. 44° 11' and long. 4° 15', and is bounded north by Moretown, east by Northfield, south by Warren, and west by Fayston. It lies 11 miles southwest from Montpelier, and 30 southeast from Burlington. It was chartered Feb. 25, 1782, to Roger Enos, Benjamin Wait, and others, containing by charter 23,030 acres, but by survey in 1788, 23,850. Nov. 7, 1822, four tier of lots from the east side of the township, were annexed to Northfield. The settlement of this township was commenced in 1789, by Gen. Benjamin Wait. The town was organized March 25, 1794, and Moses Heaton was first town clerk. The first freemen's meeting was holden in Sept., 1795, when Gen. Wait was chosen to represent the town in General Assembly. The number of legal voters in town was, at this time, 27. Gen. Wait, the first inhabitant of this town, was born at Sudbury, Mass., Feb. 13, 1737. He possessed a firm and vigorous constitution, and early manifested a disposition and talent for military enterprise. At the age of 18 he entered the service of his country, under the brave Gen. Amherst. In 1756 he was taken by the French, carried to Quebec, and from thence sent to France as a prisoner. On the coast of France he was retaken by the British and carried to England. In the spring of 1757, he returned to America, and in 1758 assisted at the capture of Louisburgh. During the two succeeding years he aided in the reduction of Canada. After the submission of Canada, he was sent, by the commandant at Detroit, to Illinois, to bring in the French garrisons included in the capitulation. He left Detroit Dec. 10, and returned on the first of March following, having performed this difficult service with singular perseverance and success. At 25 years of age he had been engaged in 40 battles and skirmishes; and his clothes were several times perforated with musket balls, but he never received a wound. In 1767, he removed to Windsor, in this state, and constituted the third family in that township. He acted a decided and conspicuous part in favor of Vermont, in the controversy with New York. In 1776, he entered the service of the United States as captain, and fought under the banners of Washington till the close of the war, during which time he had been raised to the rank of Colonel. After this, he was made a Brigadier General of militia, and was seven years high

sheriff of the county of Windsor. Having made a large purchase here, he removed his family to this township in 1789. Here he lived to behold the wilderness converted into fruitful fields, in the enjoyment of competence, and died in 1822, aged 86 years. The religious denominations are Congregationalists, Methodists, Universalists, and Baptists. The Congregational church was organized June 26, 1796, over which the Rev. Wm. Salisbury was settled Oct. 7, 1801. He was dismissed Jan. 4, 1809. The Rev. Amariah Chandler was settled Feb. 7, 1810, and dismissed Feb. 3, 1830; the Rev. Samuel G. Tenney was settled July 8, 1835, and dismissed July 5, 1837; and the Rev. Preston Taylor, the present minister, was settled Jan. 23, 1839. The other societies have had no settled ministers. There are three houses for public worship: the Congregational, built in 1807, the Methodist, in 1833, and the union house, in 1836,—the two former of wood, the latter of brick. The town is settled with industrious, enterprising, and generally flourishing farmers. The soil is diversified, but generally a mellow loam, deep and of excellent quality, producing grass in the greatest abundance. Wheat, rye, barley, oats, corn, &c., are raised in such quantities as amply to reward the hand of industry. Mad river passes through the town near the western boundary, in a direction from southwest to northeast, and falls into Winooki river in Moretown, 7 miles below Montpelier. It receives here Mill brook and Shepherd's brook from the west, and Fay's brook and Pine brook from the east, all of which are sufficient for mills. Along this river the intervalles are extensive, and, together with the adjacent uplands, make many excellent farms. The high lands, too, are of a good quality, and there can hardly be said to be a poor farm in town. A range of high lands runs through the eastern part of the town, the chief summit of which is called Bald mountain. Timber and animals such as are common in towns in the central part of the state. Clay of a good quality, iron ore and rock crystals are found. There are in town 9 school districts, 8 school houses, 2 stores, 2 tanneries, 1 grist, 1 shingle, and 7 saw mills, 1 carding machine, and clothiers' works, and several mechanics' shops. *Statistics of 1840.*—Horses, 238; cattle, 1,372; sheep, 7,400; swine, 1,022; wheat, bus. 1,615; barley, 81; oats, 9,104; rye, 222; buckwheat, 1,136; Ind. corn, 3,559; potatoes, 47,315; hay, tons, 2,266; sugar, lbs. 30,495; wool, 17,499. Population, 1,048.

WAIT'S RIVER.

WAIT'S RIVER. The main branch of this river rises in Harris' gore, and runs southeasterly along the west line of Topsham. Another branch, called Jail branch, rises in Washington, and running northeasterly, joins the main branch in the southwest part of Topsham. Another stream rises from several heads in the north part of Topsham, and, running southerly unites with the main stream near the northeast corner of Corinth. Another stream, called the south branch, rises near the middle of Washington, and pursuing a southeasterly course, joins the river at Bradford. Wait's river and all its branches are lively streams, and afford a number of very good mill privileges. In Bradford, where this river is crossed by the main road leading up the Connecticut, is a fall which furnishes a number of fine mill seats. This river is said to have derived its name from a Capt. Wait, belonging to Major Rogers' Rangers, who killed a deer near its mouth, on the return from St. Francis in 1759, which was probably the means of saving the lives of several of that famishing party. See part 2d, p. 14.

WALDEN, a post town six miles square in the western part of Caledonia county, is in lat. $44^{\circ} 28'$, and long. $4^{\circ} 45'$, and is bounded northerly by Goshen gore, easterly by Danville, southerly by Cabot, and westerly by Hardwick. It lies 22 miles northeast from Montpelier, was granted November 6, 1780 and chartered to Moses Robinson, Esq. and others August 18, 1781. Nathaniel Perkins Esq. moved his family into this township in January 1789, and his was for three years the only family in town. He has always lived upon the same farm, and is now 89 years of age. Nathan Barker, Esq. was the second settler. Jesse, son of N. Perkins was the first child born here. The settlement was commenced on the Hazen road, at a place where there was a block house erected during the revolutionary war. The town was organized March 24, 1794. N. Perkins was first town clerk and first representative. The religious societies are the Methodist, the Universalist, Baptist and Freewill Baptist. The first was organized in 1810, the second in 1829, and the last in 1837. There is a union meeting house, built in 1826, but no settled minister. This township lies between the head waters of Winooski and Lamoille river, and contains no large streams. The most considerable is Joe's brook, which originates in Cole's pond, runs southeasterly into Joe's pond, and thence easterly into Passumpsic river. The river Lamoille touches upon the northwest corner,

WALDEN.

and a head branch of Winooski river originates in the southwestern part. There are two considerable ponds, viz. *Cole's pond*, in the northeastern, and *Lyfords pond*, and a part of Joe's pond, in the southern part. The northwestern part has a handsome surface, and the soil generally is a rich deep loam and produces good crops. The rocks are generally slate and granite. A few years ago a stone mortar was found here, supposed to have been made by the Indians. The town has generally been healthy, The typhus fever in 1818, and the dysentery in 1820, produced considerable mortality. Mrs. George lived here to the age of 100 years, and Mrs. Plummer to the age of 95y. 5 m. 17 d. James Bell, Esq., a *self taught* lawyer, who has risen to considerable eminence in his profession, resides here. Not less than 40,000 sap and butter tubs are manufactured in this town annually.—There are here 12 school districts, 2 stores, 1 grist and 8 saw mills. *Statistics of 1840.*—Horses, 204; cattle, 1,575; sheep, 3,009; swine, 769; wheat, bus. 2,812; barley, 762; oats, 11,203; Ind. corn, 486, potatoes, 38,833; hay, tons, 3,466; sugar, lbs. 40,370; wool, 4,226. Population, 913.

WALLINGFORD, a post town in the southeastern part of Rutland county, is in lat. $43^{\circ} 27'$ and long. $4^{\circ} 8'$, and is bounded north by Clarendon, east by Mount Holly, south by Mount Tabor, and west by Timmouth. It lies 42 miles northeasterly from Bennington, and 10 miles south from Rutland. It was chartered November 27th, 1761, and contained by charter 23,040 acres. The settlement was commenced in 1773 by Abraham Jackson and family. The early settlers were mostly emigrants from Connecticut. The town was organized March 10, 1778. Abraham Jackson was first town clerk, and also first representative. The Baptist church was the first organized in town, and Elder Henry Green was the first settled minister. Elder Saunders is the present minister. The Congregational church was organized about 1802, when they settled the Rev. Benj. Osborn, who continued till his death in 1818. His successors have been Rev. Eli Meeker, from 1818 to 1819, Rev. Eli S. Hunter, from 1820 to 1825, and Rev. Stephen Martindale, the present minister, who was settled in Feb. 1832. Besides the above there are here societies of Episcopal Methodists and Protestant Methodists. The township is watered by Otter creek, which runs through it from south to north, by Mill river in the northeastern part, and by a number of brooks, all which afford convenient sites for mills. Lake Hiram, sometimes called Spectacle

WALLINGFORD.

WALLOOMSCOIX RIVER. WALTHAM.—WANTASTICOOK RIVER.

WARDSBOROUGH.

pond, lies on the mountain in the south-east part of the township, and covers about 350 acres. A mile and a half southwest of lake Hiram is a pond, covering about 50 acres, and west of Otter creek, opposite the village, is one covering about 100 acres. The eastern part of the township lies on the Green Mountains, and the highest ridge here is called the White Rocks. The soil near Otter creek is of a superior quality. In other parts it is good, and produces excellent grass. A range of primitive limestone passes through the west part of the township, in which have been opened several quarries of excellent marble. Green Hill, situated near the centre, is composed almost entirely of quartz. A part of the range called White Rocks appears to be granite, and the rest quartz. Further east the rocks are principally granite. At the foot of the White Rocks are large cavities formed by the fallen rocks, called the *ice beds*, in which ice is found in abundance through the summer season. The principal village in this town is situated near Otter creek, in the north part, about a mile from Clarendon line. It is a very flourishing village, containing a number of stores, mechanics' shops, &c., and is built principally upon one street, running north and south. The town contains, besides houses for public worship, twelve school districts and school houses, two grist mills, eight saw mills, six stores, one tavern, and two tanneries. *Statistics of 1840.*—Horses, 301; cattle, 2,297; sheep, 6,322; swine, 679; wheat, bu. 2,614; oats, 6,829; rye, 320; buckwheat, 193; Ind. corn, 7,384; potatoes, 38,775; hay, tons, 5,216; sugar, lbs. 17,715; wool, 14,560. Population, 1,608.

WALLOOMSCOIX RIVER is a small stream which is formed in Bennington by the union of several branches which rise in Glastenbury, Woodford, and Pownal. It takes a northwestern direction, leaves the state near the northwest corner of Bennington, and unites with Hoosic river, nearly on the line between Washington and Rensselaer counties, N. Y. Between this stream and Hoosic river was fought the Bennington battle. On the Walloomscoix and its branches are many good mill privileges and some fine meadows. (*Part second, page 20.*)

WALTHAM, a township in the central part of Addison county, is in lat. 44° 8' and long. 3° 41'. and is bounded north by Ferrisburgh, east and south by New Haven, and west by a part of Vergennes and Otter creek, which separates it from Pantton. It lies 24 miles south from Burlington, and 9 northwest from Middlebury. This township is about three miles square.

It was set off from New Haven, and incorporated in 1796, and was named Waltham by Mr. Phineas Brown of this town, who emigrated from Waltham, Ma. It was organized immediately after, and Andrew Barton was the first town clerk. The settlement of this township was commenced just before the beginning of the revolutionary war, by a family of Griswolds and others from Connecticut. During the war a Mr. Griswold of this town was taken by the Indians, and carried a prisoner to Canada, where he was detained about three years, and the settlement here was broken up. At the close of the war the settlement was recommenced by Messrs. Griswold, Brown, Cook and others, and advanced with considerable rapidity. The religious denominations are Congregationalists and Baptists; but no meeting-house or settled minister. Otter creek washes the western border, but there are no mill privileges in town. Buck mountain lies near the centre of the township, and is the highest land in the county west of the Green Mountains. It commands a very extensive and beautiful prospect. The soil is generally good, and along the creek are some fine tracts of intervale. The timber is pine, oak, maple, beech, birch, walnut, butternut, ash, and hemlock. The town is divided into four school districts. *Statistics of 1840.* Horses, 78; cattle, 662; sheep, 4,934; swine, 266; wheat, bus. 346; oats, 1,187; rye, 100; buckwheat, 41; Indian corn, 1,910; potatoes, 7,600; hay, tons, 1,730; wool, 12,652. Population, 283.

WANTASTICOOK RIVER, written also Wantastiqueg and Wantastiquet, but now more commonly called West river, rises in Weston, and runs south into Londonderry. Near the south line of this township it receives Winhall river from Winhall. It then takes a southeasterly course through Jamaica, Townshend, Newfane and Dummerston, and unites with Connecticut river in the northeast part of Brattleborough. In Jamaica, it receives from the west Bald Mountain branch, which rises in Stratton, and another large branch from Wardsborough, and from the east, Meadow branch, which rises in Windham. In Newfane it receives South branch and Smith's branch. This stream affords but few mill privileges, but there are a great number on its branches. Along its banks are some fine tracts of intervale. This river receives the waters from about 440 square miles.

WARDSBOROUGH, a post town in the western part of Windham county, is in lat. 42° 59' and long. 4° 11', and is bounded north by Jamaica, east by Newfane

WARNER'S GORE.

WARREN.—WARREN GORE.

WASHINGTON

and Townshend, south by Dover, and west by Stratton and Somerset. It lies 20 miles northeast from Bennington and 15 northwest from Brattleborough. It was granted November 7, 1780, and chartered to William Ward, of Newfane, and others, the same day. In 1788 this township was divided into two districts, called the North and South districts. In 1810 the two districts were incorporated into two separate and distinct towns: the northern by the name of Wardsborough, and the southern by the name of Dover. The settlement of Wardsborough was commenced in June, 1780, by John Jones, Ithamer Allen and others, from Milford and Sturbridge, Mass. The town was organized March 14, 1786, and Aaron Hudson was the first town clerk. He was also the first representative, chosen the next year. The religious denominations are Congregationalists, Baptists, Methodists and Universalists. The Congregational church was organized May 1, 1793, over which the Rev. James Tufts was ordained November 4, 1795. The Rev. E. G. Bradford was settled as his assistant, Oct. 5, 1836. Their meeting-house is in the centre of the town, and was erected in 1796. The Baptist church was formed about the year 1793, and has a meeting-house in the north part of the town, built in 1795. Elder Stephen Choate was ordained over this church in 1806, and died in 1811, since which they have depended mostly upon temporary supplies. Of the others we have no particulars. In 1795 the canker rash was very mortal here among the children, and the epidemic of 1813 carried off about 40 persons, mostly adults, in the course of six months. The surface of this township is very uneven, and some parts of it rocky. Between this town and Dover is a range of high hills. The soil is better adapted to grazing than tillage, yet there is sufficient arable land to produce grain for the support of the inhabitants. The township is watered by a considerable branch of West river, which affords some tolerable good mill privileges. Of the rare minerals found here, tremolite and zoisite are the most important. The tremolite is in fine crystals, sometimes six inches long, penetrating quartz. The zoisite is in prismatic crystals, of a gray color, sometimes a foot in length, and from one to two inches wide. There are here 7 school districts and school houses, 3 grist, 1 fulling and 6 saw mills, 3 stores, 2 taverns and 1 tannery. *Statistics of 1840.*—Horses, 183; cattle, 2,116; sheep, 3,382; swine, 533; wheat, bus. 1,277; barley, 165; oats, 3,782; rye, 541; buckwheat, 338; Indian

corn, 2,487; potatoes, 35,538; hay, tons, 2,833; sugar, lbs. 15,810; wool, 5,442. Population, 1,102.

WARNER'S GORE, a tract of 2,000 acres of land, lying the northwestern part of Essex county, is bounded north by Norton, east by Warren's gore, south by Morgan, and west by Holland. It was granted October 20, 1787. It contains no streams of consequence, and is uninhabited.

WARREN, a post town in the southeast part of Washington county, is in lat. 44° 6' and long. 4° 11', and is bounded northerly by Waitsfield and a part of Fayston, easterly by Roxbury, southerly by Granville, and westerly by Lincoln. It lies 31 miles southeast from Burlington, and 16 southwest from Montpelier. It was chartered October 20, 1789, to the Hon. John Throop and others, containing 16,660 acres. The settlement of this township was commenced about the year 1797, by Samuel Lard and Seth Leavitt. The town was organized soon after, and S. Lard was chosen town clerk. Thomas Jerrells was the first representative. The religious denominations are Congregationalists, Methodists and Baptists. Mad river rises in Avery's gore, and runs through this township in a northerly direction into Waitsfield, affording a number of good mill privileges. This township lies between the two ranges of the Green Mountains at the place where the two ranges commence, but the surface is not very mountainous. It is divided into 8 school districts. There are here 10 saw and 3 grist mills, 3 stores and 1 tavern. *Statistics of 1840.*—Horses, 260; cattle, 1,349; sheep, 7,084; swine, 864; wheat, bus. 1,711; barley, 74; oats, 7,286; rye, 265; buckwheat, 2,018; Ind. corn, 1,737; potatoes, 44,081; hay, tons, 2,054; sugar, lbs. 26,934; wool, 14,667. Population, 943.

WARREN GORE, an uninhabited tract of 6,380 acres, lying in the northwestern part of Essex county, and belonging to Warren, is bounded north by Norton, east by Avery's gore, south by Morgan, and west by Warner's gore. On the line between this gore and Norton is a considerable pond, the waters of which flow to the north into Masuippi river in Canada.

WASHINGTON, a post town in the northwestern part of Orange county; is in lat. 44° 4' and long. 4° 35', and is bounded north by Orange, east by Corinth, south by Chelsea, and west by Williamstown. It lies 15 miles southeast from Montpelier, and 43 north from Windsor. It was granted November 6, 1780, and chartered to Major Elisha Burton and others, Oct.

WASHINGTON COUNTY.

WATERBURY.

25, 1731, containing 23,040 acres. The territory embraced in this township was granted by New York by the name of Kingland, and Kingland was constituted the shire town of Gloucester county. A town plot was laid out into village lots near the centre, and a log jail erected, which gave the name of *jail branch* to two streams which rise here, one running into Winooski river, and the other into Wait's river. The township was surveyed in 1784, and the settlement commenced in 1785, by Daniel Morse, who was soon joined by his brother John Morse. A son of John Morse was the first child born here, and received, in consequence, 50 acres of land from the proprietors. The town was organized March 1, 1792, and Jacob Burton was first town clerk. It was first represented in 1794 by Thaddeus White. The religious denominations are Congregationalists, Methodists, Freewill Baptists and Baptists. The former are the most numerous. There are two meeting-houses, one in the north part, completed in 1823, and the other, in the southwest part, built in 1824. Branches of Winooski, Wait's and White river originate in this township, but they are small, and afford few mill privileges. The timber is principally maple. On jail branch of Winooski river is a small village, containing several stores, shops and mills. The town contains 17 school districts, 1 grist and 7 saw mills, 2 stores, 1 tavern and 1 tannery. *Statistics of 1840.* Horses, 328; cattle, 2,002; sheep, 7,359; swine, 1,125; wheat, bus. 3,647; barley, 877; oats, 11,100; rye, 216; buckwheat, 1,831; Ind. corn, 2,838; potatoes, 70,770; hay, tons, 4,381; sugar, lbs. 27,595; wool, 10,836. Population, 1,359.

WASHINGTON County lies principally between the two ranges of the Green Mountains, and nearly in the centre of the state. It is situated between $44^{\circ} 1'$ and $44^{\circ} 32'$ north lat., and between $4^{\circ} 10'$ and $4^{\circ} 41'$ east long., being about 34 miles from north to south, and 31 from east to west. It is bounded north by Lamoille and Caledonia counties, east by Caledonia county, southeast by Orange county, southwest by Addison county, and west by Chittenden county. It was incorporated November 1, 1810, by the name of Jefferson county, and organized December 1, 1811. The name was altered to Washington county November 8, 1814. Montpelier, lying near the centre of the county, is the seat of justice, and is a place of considerable business. The supreme court sits here on the 6th Tuesday after the 4th Tuesday in January, and the county court on the 2d Tuesday in April

and 3d in November. This county is very uneven, and is watered by Winooski river and its numerous branches. In the eastern part there is an abundance of excellent granite. West of this the rocks are principally argillaceous slate, quartz, chlorite slate, and mica slate. *Statistics of 1840.*—Horses, 4,360; cattle, 25,415; sheep, 110,872; swine, 12,150; wheat, bus. 44,110; barley, 4,028; oats, 200,294; rye, 5,763; buckwheat, 23,066; Indian corn, 63,108; potatoes, 698,745; hay, tons, 55,100; sugar, lbs. 451,348; wool, 159,724. Population, 23,506.

WATERBURY, a post town in the western part of Washington county, is in lat. $44^{\circ} 23'$ and long. $4^{\circ} 17'$, and is bounded north by Stow, east by Middlesex, south by Winooski river, which separates it from Duxbury, and a part of Moretown, and west by Bolton. It lies 12 miles northwesterly from Montpelier and 24 southeast from Burlington; and was chartered June 7, 1763, containing 21,220 acres. In June, 1784, Mr. James Marsh moved his family, consisting of a wife and eight children, into this township from Bath, N. H., and took possession of a surveyor's cabin, which was standing near Winooski river. Mr. Marsh was induced to move his family here at the time he did by the promise of the proprietors, that several other families should be procured to move into the town in the following fall. This promise was not fulfilled, and for nearly a year this solitary family scarcely saw a human being but themselves, and, for more than two years, their nearest neighbors were in Bolton, 7 miles distant. In the spring of 1785, Hon. Ezra Butler visited this town, and spent some time in preparing a place of residence. In September, 1786, he moved his family from Weathersfield, Vt. to this town. In 1788, Mr. Caleb Munson moved into the town with his family, and soon after was followed by several others. The town was organized March 31, 1790. Hon. Ezra Butler was the first town clerk, and Dr. Daniel Bliss the first representative. About the year 1800 a revival of religion commenced in this town, and continued through that and a part of the following year. About this time a Congregational, a Baptist and a Methodist church were organized, and Hon. Ezra Butler was ordained Elder of the Baptist church, with which he was connected till his death. In 1803 the Rev. Jonathan Hovey was ordained and settled as pastor of the Congregational church in this town. He was dismissed about four years after his settlement. The Rev. Daniel Warren was settled

WATERBURY RIVER.

over this church from 1826 to 1839. The present minister, the Rev. J. F. Stone, was settled in 1839. There are two small but pleasant villages. The largest, called *Waterbury Street*, is in the south part near Winooski river, and contains a Congregational meeting-house, built in 1824, a Methodist meeting-house, built in 1841, a village school-house, a tavern, 3 stores, a post office, bearing the name of the town, and the usual variety of mechanics. The other village is near the centre of the township, and is called *Waterbury Centre*. It contains a post office, bearing the name of the village, two brick meeting-houses, one belonging to the Baptists and the other to the Methodists, 1 store, &c. There is much level land in this town, and where the surface is uneven, the swells are generally so gradual as to present little or no obstacle to cultivation. The soil is good, being in general dry and warm. The intervale on Winooski river, and on several smaller streams, is not surpassed in fertility by any in the state, and the lands in every part of the town produce in a manner that amply repays the labor of the skilful farmer. The rocks are principally chlorite and mica slate and quartz, the former containing sulphuret of iron and sulphuret of copper. The timber is generally hard wood, with a considerable mixture of spruce and hemlock. The town is separated from Duxbury by Winooski river. Waterbury river runs through it from north to south. In the easterly part is a large brook, called Thatcher's branch, running nearly parallel to Waterbury river. These two streams afford several excellent mill privileges, most of which are now occupied. Smaller streams are numerous in all parts of the township. In the southwest corner of the township the passage of Winooski river through a considerable hill is reckoned a curiosity. See *Winooski river*. There are in town 4 meeting-houses, 17 school districts, 2 post offices, 4 stores, 1 tavern, 2 grist and 10 saw mills, 3 tanneries, 1 clothing works and woollen factory. *Statistics of 1840.*—Horses, 210; cattle, 1,608; sheep, 4,085; swine, 493; wheat, bus. 2,329; barley, 50; oats, 11,775; rye, 120; buckwheat, 2,100; Indian corn, 4,070; potatoes, 21,389; hay, tons, 3,327; sugar, lbs. 25,502; wool, 9,001. Population, 1,192.

WATERBURY RIVER rises in Morris-town, and runs south through the western part of Stow and Waterbury into Winooski river. In Stow it receives one considerable tributary from the east which rises in Worcester, and two from the west which rise in Mansfield. It also re-

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ceives several tributaries from the west, in Waterbury, which originate in Bolton. The whole length of the stream is about 16 miles, and it affords a number of good mill privileges.

WATERFORD, a post town in the eastern part of Caledonia county, is in lat. 44° 26' and long. 5° 1', and is bounded northeast by Concord, southeast by Connecticut river, which separates it from Lyman, N. H., southwest by Barnet, and northwest by St. Johnsbury. It lies 32 miles nearly east from Montpelier and 21 north from Newbury. It was granted November 7, 1780, and chartered to Benjamin Whipple and others, November 8, 1780, by the name of Littleton. The settlement of this township was commenced in 1787. The town was organized May 6, 1793, and Selah Howe was the first town clerk. The name was altered from Littleton to Waterford in 1797. The religious denominations are Congregationalists, Methodists, Freewill Baptists, and Baptists. The Rev. Asa Carpenter was ordained over the Congregational church May 30, 1798, and dismissed June 18, 1816. The Rev. Reuben Mason was ordained Oct. 20, 1819, and dismissed in 1825; the Rev. Thomas Hall, Sept. 28, 1825, and is the present minister. The church at present consists of about 120 members. There are three meeting-houses; that belonging to the Congregationalists is near the centre, and that belonging to the Freewill Baptists is near the line between this township and St. Johnsbury. The number of deaths in this town up to the year 1814, was 110, averaging seven per year, since the commencement of the settlement. The Passumpsic river runs across the northwest corner, and Moose river just touches upon this township. Stiles' pond is in the southeast part, and covers about 100 acres. The fifteen mile falls in the Connecticut are partly against this township. There are some flats along the river here, but they are narrow and not overflowed at high water. The surface is generally rough and stony, and the timber maple, beech, birch, spruce, hemlock, &c. In this town there are 3 stores, 1 oil mill, and 8 saw mills. *Statistics of 1840.*—Horses, 465; cattle, 2,573; sheep, 7,341; swine, 1,263; wheat, bus. 2,750; barley, 239; oats, 23,022; rye, 438; buckwheat, 459; Ind. corn, 5,022; potatoes, 64,265; hay, tons, 5,015; sugar, lbs. 29,805; wool, 12,032. Population, 1,388.

WATER QUECHEE RIVER. See *Olla Quichee River*.

WATERVILLE, a post town in the northwestern part of Lamoille county, is in

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lat. 44° 33', and is bounded north by Bakersfield, east by Belvidere and Johnson, south by Cambridge, and west by Fletcher. It was chartered Oct. 26, 1788, to James Whitelaw, James Savage and William Coit, by the name of Coit's Gore, and originally contained 11,000 acres. It, with some portions of the adjoining towns, was incorporated into a town by the name of Waterville, Nov. 15, 1824. The settlement was commenced about the year 1789. The first mills were erected in 1796 and 1797, by John Johnson for Wm. Coit. It is watered principally by the north branch of Lamoille river, which affords several good mill privileges. Along this stream is a tract of very good land. Other parts are somewhat mountainous and broken. There are here 6 school districts, 1 grist, 3 saw and 2 fulling mills, 1 woollen factory and 2 stores. *Statistics of 1840.*—Horses, 110; cattle, 874; sheep, 1,557; swine, 270; wheat, bus. 697; oats, 2,542; rye, 20; Indian corn, 1,104; potatoes, 23,054; hay, tons, 1,319; sugar, lbs. 11,020; wool, 3,118. Population, 610.

WEATHERSFIELD, a post town in the eastern part of Windsor county, is in lat. 43° 23' and long. 4° 30', and is bounded north by Windsor, east by Connecticut river, which separates it from Claremont, N. H., south by Springfield, and west by Cavendish and Baltimore. It is 70 miles south from Montpelier, and 21 south from Woodstock. It was chartered to Benjamin Allen and others, Aug. 20, 1761, and contains 22,030 acres. The early settlers of this town emigrated principally from Connecticut. It was organized in March, 1778. Benoni Tuttle was the first town clerk, and Israel Burlingame its first representative. The Rev. James Treadway, of the Congregational order, its first minister, was settled by the town in 1779, and continued their pastor until 1783. Rev. Dan Foster was settled in 1787, and dismissed in 1799. Rev. James Converse was ordained Feb. 10, 1802, and remained their pastor until his death, Jan. 7th, 1839. Mr. C. was eminently useful, and died universally beloved and lamented. During his successful ministry, there were several extensive revivals of religion in town. Rev. Nelson Bishop was settled in 1840, and dismissed in March, 1842. In 1835 a Congregational church was formed at Perkinsville, in the west part of the town, which have erected a house of worship, but have no settled minister. Previous to this a neat and commodious house of worship, of the Gothic style, had been erected here by the united efforts of different denomi-

nations, which is now principally occupied by the Baptists, under the pastoral care of the Rev. Mr. Lunt, who was ordained in 1841. In 1825 the Methodists erected a meeting house in the north part of the town, and in 1836 a more numerous society built a neat chapel of brick at Perkinsville. In 1838 a church was organized in the southeast part of the town, formed mostly of members from the centre church, which has erected a beautiful church. Rev. John Dudley, the present pastor of this church, was installed in 1841. The first meeting house, situated near the centre of the town, was built by a land tax, and was consumed by fire in March, 1821, generally supposed to be the work of an incendiary. The same year the Congregational society, which had been previously organized, built a beautiful brick edifice on the same site. During the spring and summer of 1791, there were more than 70 cases of the small pox here, 9 of which were fatal. Among those who sacrificed their time and money, and were indefatigable in ameliorating the sufferings of their neighbors, may be mentioned *Thomas Prentiss, Joseph Hubbard, and Samuel Steele*, the earliest settlers of the town, now dead. The epidemic of 1812 prevailed extensively, carrying off about 70 of the inhabitants. Connecticut river washes the eastern border of this town, upon the banks of which are some of the best farms in the state. In the southeast part the river makes a bend, significantly called "the Bow," from its resemblance to an ox-bow. This encloses several hundred acres of the most productive land, principally owned by *Hon. Wm. Jarvis*, late United States Consul at Lisbon. Mr. J. resides upon this farm, and has done much toward improving the quality of wool throughout the state. His flock of full breed merino is probably not excelled by any in Vermont. Black river waters the western section of this town, affording numerous privileges for mills and manufacturing establishments. The meadows upon this river are rich and fertile. The remaining part of the town is undulating, but fertile, and richly rewards the labor of the husbandman. Large quantities of pork, beef, butter and cheese were formerly furnished for the Boston market, by the enterprising farmers, but of late the attention of the agriculturist has been turned more to wool growing, for which the high lands are admirably fitted. The bed of Black river, for a considerable distance, is a solid mass of gneiss and mica slate, and upon each side of it are considerable elevations of the same material,

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interspersed with lime quarries. Limestone abounds in the northwestern part, from which large quantities of lime of a superior quality, are manufactured annually. There are also in the western part localities of serpentine, ligniform asbestos, tremolite, and crystalized sulphuret of iron, which are often visited by the mineralogist, who is richly rewarded for his labor. The asbestos is of a very superior quality. On the north, between this town and Windsor, lies Ascutney Mountain. Perkinsville, situated in the southwestern part of the town, derives its name from a *Mr. Perkins*, a capitalist from Boston, who in 1830 purchased a small woollen factory, which he greatly enlarged, thus giving an impulse to the business of the village, and attracting the attention of other capitalists to improve the favorable advantages afforded by the rapids in Black river, to engage in the same enterprise. In 1835 a brick edifice, 110 ft. in length, 46 ft. in width, and 4 stories high, was erected for the purpose of manufacturing cassimere and sattinet. In this there were 8 full sets of machinery, moved by a wheel 26 feet long and 19 feet in diameter. When in full operation, this establishment gave employment to 150 hands, and manufactured 750 yards of cloth per day. In November, 1839, this expensive building, with all its valuable contents, was destroyed by fire. Insurance, \$81,000. It has not been rebuilt. The broad-cloth mill, purchased by Mr. Perkins, is still in operation. There is a paint and printing-ink establishment, where is manufactured a very superior quality of engraving ink, also a Bobbin factory, with the usual mechanical work carried on in manufacturing villages. In the spring of 1841 an academy was opened under the superintendence of Messrs. *A. P. Chase* and *S. A. Bullard*. It is now in a flourishing condition, the number of students the first year being 175. The school is furnished with a choice set of chemical and philosophical apparatus. There are three other small villages in town, one in the south east part, called "the Bow," one in the northeast, called "the Corners," and one at the northwest, called "Greenbush." At each of these villages, and also at Perkinsville, there is a post-office, bearing the name of the village, except the one at the *Bow*, which bears the name of the town. There are in town 12 school districts, each furnished with a neat and commodious school-house. There are 4 grist and 9 saw mills, 4 woollen factories, 6 stores, 5 taverns, and 2 tanneries. *Statistics of 1840.*—Horses, 393; cattle, 2,345; sheep, 10,

756; swine, 1,259; wheat, bus. 538; barley, 128; oats, 6,418; rye, 4,352; buckwheat, 927; Ind. corn, 14,204; potatoes, 58,498; hay, tons, 5,921; sugar, lbs. 9,185; wool, 30,120. Population, 2,082.

S. P.

WELLS, a small post town in the western part of Rutland county, is in lat. 43° 27' and long. 3° 54', and is bounded north by Poultney and a part of Middletown, east by a part of Middletown and Tinmouth, south by Pawlet, and west by Hampton, N. Y. It lies 40 miles north from Bennington, 65 southwest from Montpelier, and 13 southwest from Rutland. It was chartered Sept. 15, 1761, to Eliakim Hall and others. This township was originally 6 miles square, but a part of it has since been annexed to Poultney and a part to Middletown. The settlement was commenced by Ogden Mal-lary, about the year 1768. Daniel and Samuel Culver came into town in 1771. The town was organized March 9, 1773, and John Ward was first town clerk. It was first represented in 1778, by Daniel Culver. The religious denominations are Methodists, Reformed Methodists, Episcopalians, and Universalists. There are three houses for public worship, one belonging to the Methodists, one to the Episcopalians, and a union house. The Episcopal church, called *St. Paul's church*, consists of 24 communicants. Their house of worship was erected in 1840. There is no settled minister. The first settlers of this township were afflicted with fever and ague, but the town has, for many years past, been remarkably healthy. Wells pond, called also lake Austin, is about 5 miles long, and in some places one mile and a half wide, and covers upwards of 2,000 acres. About one third part of this pond lies in Poultney. The outlet of this pond is the principal stream, and on this are a saw mill, a grist mill, one clothier's works, and machinery. There is one other stream, on which are mills. The western part of this township is generally level, and the eastern part is mountainous and broken. The soil is generally good, where it is not so uneven as to preclude the possibility of cultivation. There is a small village, situated near the south end of the pond, called the *corner*, which contains a meeting-house, a store, a tavern, and several mechanics' shops. There are in town 10 school districts, 1 grist and 2 saw mills, 1 woollen factory, 1 fulling mill, 2 carding machines, 1 store, 1 tavern, and 1 tannery. *Statistics of 1840.*—Horses, 148; cattle, 1,019; sheep, 4,283; swine, 446; wheat, bus. 742; oats, 4,713; rye, 1,415;

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buckwheat, 301; Ind. corn, 4,275; potatoes, 16,360; hay, tons, 2,261; sugar, lbs. 6,200; wool, 8,752. Population, 740.

WELLS RIVER, has its source in Kettle pond, which lies at the northwest corner of Groton, and a part of it in Marshfield. It runs nearly southeast about 2 miles, and falls into Long Pond in Groton, which is about 2 miles long and 100 rods wide. From this pond it continues its southeasterly course half a mile, and falls into another pond, which is about half a mile long and quarter of a mile wide. It then runs a mile and a half, and meets the south branch, which rises near the southwest corner of the town, and runs nearly east to its junction with the main stream; it then runs east southeast about a mile, and receives the North branch, which has its source near the northeast corner of the town. Continuing the same course, it passes through the northwest part of Ryegate into Newbury, and running near the line between Newbury and Ryegate about 4 miles, falls into Connecticut river about half a mile south of the northeast corner of Newbury. This is generally a rapid stream, furnishing many excellent mill privileges, on which mills are erected. At Wells River village, near the mouth of the river, are a paper mill, a corn mill, a saw mill, and other machinery. Wells river had its name long before any settlement was made in Vermont, but we have not ascertained why it was so called.

WENLOCK, a township in the central part of Essex county, is in lat. $44^{\circ} 47'$, and is bounded northerly by Lewis and Avery's gore, easterly by Brunswick, southerly by Ferdinand and Brighton, and westerly by Morgan. It was chartered Oct. 13, 1761, and lies 53 miles northeast from Montpelier. The south and principal branch of Nulhegan river, rises in this township. A road has been opened along this stream from Connecticut river to Orleans county. There are only 4 or 5 families settled in this township, and it is unorganized. *Statistics of 1840.*—Horses, 6; cattle, 41; sheep, 37; swine, 13; wheat, bus. 60; oats, 62; rye, 10; buckwheat, 280; Ind. corn, 12; potatoes, 950; hay, tons, 76; sugar, lbs. 1,200; wool, 65. Population, 28.

WEST FAIRLEE, a post town in the eastern part of Orange county, is in lat. $43^{\circ} 56'$ and long. $4^{\circ} 46'$, and is bounded north by Bradford, east by Fairlee, south by Thetford, and west by Vershire. It is situated 28 miles southeast from Montpelier, and 35 northeasterly from Windsor. It was chartered in connexion with Fairlee, Sept. 9, 1761. This township was

set off from Fairlee and constituted a township by the name of West Fairlee, Feb. 25, 1797. This town was organized immediately after it was set off, and Hon. Elisha Thayer was first town clerk. It was first represented separately from Fairlee in 1823, by Samuel Graves. The Rev. Joseph Tracy was settled over the Congregational church here and the western part of Thetford, in July, 1820. He preached at the meeting house here, and at Post Mills village, in Thetford, alternately. Fairlee lake lies partly in the southeast corner of this township, and Ompompanoosuc river runs across the southwest corner. The surface is very uneven. The town is divided into seven school districts, and contains 1 store, 1 grist and 4 saw mills, 1 fulling mill, and 1 tannery. *Statistics of 1840.*—Horses, 210; cattle, 1,316; sheep, 5,249; swine, 518; wheat, bus. 821; barley, 90; oats, 6,938; rye, 373; buckwheat, 1,133; Ind. corn, 3,758; potatoes, 29,641; hay, tons, 2,775; sugar, lbs. 12,622; wool, 10,525. Population, 824.

WESTFIELD, a post town in the northwest part of Orleans county, is in lat. $44^{\circ} 52'$ and long. $4^{\circ} 30'$, and is bounded north by Jay, east by Troy, south by Lowell, and west by Montgomery. It lies 42 miles north from Montpelier, and 44 northeast from Burlington. It was chartered May 15, 1780, to Dan'l Owen and associates, containing 23,040 acres. The settlement was commenced in 1799, by Jesse Olds, a Mr. Hobbs, and others. The town was organized March 29, 1802, and Jesse Olds was first town clerk, and Medad Hitchcock first representative. There are 5 religious societies, the Congregational, formed in 1819, the Methodist, in 1831, the Baptist, in 1831, the Christian, in 1824, and the Universalist, in 1835. The ministers of the Congregational ch. have been, Rev. Silas Lamb, 3 years from 1826; Rev. Wm. Holmes, 3 years from 1832; and Rev. Reuben Mason, since 1838. The only house of worship was built by Dea. Luther Page, for the Congregational society. Missisco river runs about 4 miles, through the southeastern part of the township, and receives here 3 considerable tributaries which afford several mill privileges. The eastern part of this township is very good land, but the western is high and mountainous. Hazen's Notch in the Green Mountains lies in the southwest corner. The town contains 4 school districts, a small meeting-house, 2, stores, and 5 saw mills. *Statistics of 1840.*—Horses, 106; cattle, 681; sheep, 1,823; swine, 355; wheat, bush. 917; barley, 57; oats, 3,484; rye, 214;

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buckwheat, 777 ; Ind. corn, 958 ; potatoes, 19,190 ; hay, tons, 1,221 ; sugar, lbs. 11,375 ; wool, 3,711. Population, 370.

WESTFORD, a post town in the north part of Chittenden county, is in lat. 44° 36' and long. 4° 1', and is bounded north by Fairfax, east by Underhill, south by Essex, and west by Milton. It lies 13 miles northeast from Burlington, and 32 northwest from Montpelier, and was chartered June 8, 1763, containing 23,040 acres. The settlement was commenced immediately after the revolutionary war, by Hezekiah Parmelee and others. The religious denominations are Congregationalists, Methodists, and Baptists, each of which have a meeting house. The Rev. Simeon Parmelee was settled in September, 1809, over the Congregational church, and continued many years. The Rev. John H. Woodward is the present minister. The only stream of consequence in the township, is Brown's river, which runs through it from south to north, and falls into Lamoille river in Fairfax. The surface of the township is uneven, but it contains no mountains. The town contains 11 school districts, 1 grist and 8 saw mills, 1 fulling mill, and 4 stores. *Statistics of 1840.*—Horses, 290 ; cattle, 1,235 ; sheep, 7,196 ; swine, 997 ; wheat, bus. 1,617 ; barley, 25 ; oats, 5,569 ; rye, 637 ; buckwheat, 873 ; Indian corn, 4,780 ; potatoes, 45,317 ; hay, tons, 4,456 ; sugar, lbs. 21,885 ; wool, 13,636. Population, 1,352.

WEST HAVEN, a post town in the western part of Rutland county, is in lat. 43° 36' and long. 3° 44', and is bounded north by Benson, east by Fair-Haven, south by Poultney river, which separates it from Whitehall, N. Y., and west by lake Champlain. This township was set off from Fair-Haven in Oct., 1792, and for its early history, the reader is referred to the account of that township. It was organized immediately after the division, and William Wyman was the first town clerk. The Congregational and Baptist are the only regular churches. The Rev. Ebenezer Hibbard was installed over the Congregational church in this township and in Whitehall in 1822, and dismissed in 1829. The present minister is Rev. J. Gilbert, and the minister of the Baptist church is the Rev. J. P. Huntington. In 1787 Doct. Simeon Smith moved into this town from Sharon, Ct. He died in 1804, having accumulated a large estate, \$1,000 of which he bequeathed to the town of West Haven, which was to be let under the direction of the select men, at the rate of 6 per cent. interest, the interest to be paid annually, and again loaned.

At the end of 60 years, a certain part of the money accumulated was to be employed in building a meeting house, settling a minister, erecting school houses, &c. The epidemic of 1812 and 13 was very distressing here, and destroyed many valuable lives. Hubbardton river and Cogman's creek are the only streams of consequence, except Poultney river, which washes a part of the southern boundary. They empty into East Bay, one about a mile, and the other about two miles below the head of the bay. Hubbardton river has three considerable falls in West Haven, on which mills are erected. The soil is principally clay, and there is an abundance of excellent limestone. There are 9 school districts, 1 store, 1 grist and 3 saw mills, and 2 woollen factories. *Statistics of 1840.*—Horses, 136 ; cattle, 878 ; sheep, 8,029 ; swine, 304 ; wheat, bus. 1,196 ; oats, 3,140 ; rye, 940 ; buckwheat, 282 ; Ind. corn, 2,458 ; potatoes, 7,895 ; hay, tons, 2,578 ; sugar, lbs. 340 ; wool, 15,153. Population, 774.

WESTMINSTER, a post town in the eastern part of Windham county, is in lat. 43° 5' and long. 4° 32', and is bounded north by Rockingham, east by Connecticut river, which separates it from Walpole, N. H., south by Putney, and west by Brookline and Athens. It lies 37 miles northeast from Bennington, and 82 south from Montpelier. This township was chartered November 9, 1752 ; and as the grants which had been made of the townships of Marlborough and Wilmington, anterior to that date, were superseded by their new charters, it may be considered as the third, in point of time, in the state : Bennington and Halifax having preceded it. It contains 25,000 acres. At what precise time the settlement commenced, it is now difficult to ascertain. One of the oldest inhabitants thinks it to have been about the year 1741. The earliest permanent settlers came from Northfield, in Massachusetts, and from Ashford and Middletown, in Connecticut ; and were soon followed by others from the same states. The pleasant situation of the town, and its proximity to the fort maintained by the New Hampshire government in what is now called Walpole, caused the settlement to proceed with considerable rapidity, and it was, at an early period, one of the principal towns west of the Connecticut. A jail formerly stood in this place, and a court house in which were held some of the earliest courts of justice ; and when Vermont subsequently set up an independent jurisdiction, several sessions of the legislature were also held here. It was here that the

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famous massacre of the 13th of March, 1775, took place, and that the first regular measures were adopted to resist by force the government of New York; and after the erection of the county of Windham, the courts were held alternately at Westminster and Marlborough, for many years, until they were removed to Newfane. For many years afterwards it maintained its reputation as a place of considerable business and trade; but has, of late years, been rather stationary, if not on the decline. It is, however, a good township of land, and inhabited by a steady, industrious, agricultural population. Westminster is divided, by law, into two parishes, the east and the west. The Congregational church was organized, and the Rev. Jesse Goodell settled in the east parish June 11, 1767, who left in 1769. His successors have been the Rev. Joseph Bullen from 1774 to 1785, and the Rev. Sylvester Sage from Oct. 13, 1790 to March 1, 1838. The Rev. Calvin R. Batchelder is the present minister. Their first meeting house was erected in 1770, the present in 1835. The Congregational church was organized in the west parish in 1799. The ministers have been the Rev. Reuben Emerson from Feb. 18, 1800 to March 29, 1804; the Rev. Timothy Field from January 20, 1807 to April 1, 1835, and the Rev. Preston Taylor from April 1, 1835 to Nov. 6, 1836. The Rev. J. Wellman, the present minister, was settled March 7, 1838. There are some Baptists and Methodists, but they have no organized societies. The Rev. and venerable S. Sage died here in Jan. 1841; he preached his 50th anniversary sermon October, 18, 1840. This town has had its share of men whose names occupy a distinguished place in the history of the state. At an early period Crean Brush, the colonial deputy secretary of New York, and Ezra Stiles, the son of the late Dr. Stiles, president of Yale College, removed to this place, and entered into the practice of the law. The former left at the breaking out of the revolution, and died a short time after, and the latter deceased long before his learned and venerated father. Gen. Stephen R. Bradley, whose name occurs so often in all the important transactions connected with the formation of the state, and who is better known abroad as a senator in Congress, which office he held for sixteen years, was, for more than thirty years, a resident in this town; as was also the Hon. Lot Hall, a distinguished lawyer, and afterwards judge of the supreme court, who died here in the year 1809. Hon. Mark Richards and Hon. Wm. C.

WESTMORE.

Bradley, late members of Congress, reside here. The principal and oldest village is delightfully situated in the east parish, on the bank of Connecticut river. The main street, which is perfectly level, crosses a table of land about one mile in diameter, considerably elevated above the river, and also above the large and fertile meadows by which it is approached on the north and south; and the whole is enclosed by a semi-circle of hills which touch the river about two miles above and below the village. It is this barrier which, while it contributes to the natural beauty of the place, has, by turning the water courses in another direction, deprived it of all those facilities of access, and of water power, which have so much contributed to the rapid growth of some of the neighboring villages. The rocks are granite, slate, and silicious limestone. There are in town 14 school houses, 2 grist and 8 saw mills, 1 tannery and store. The first newspaper in Vermont was printed here. (*See part second, page 171.*) *Statistics of 1840.*—Horses, 301; cattle, 1,739; sheep, 16,976; swine, 1,185; wheat, bush. 1,898; barley, 479; oats, 19,649; rye, 3,299; buck-wheat, 1,144; Indian corn, 12,498; potatoes, 20,267; hay, tons, 4,307; sugar, lbs. 28,670; wool, 31,382. Population, 1,546.

WESTMORE, a township in the southeast part of Orleans county, is in lat. 44° 45' and long. 4° 57', and is bounded northerly by Brighton and Charleston, easterly by Newark, southerly by Sutton, and westerly by Brownington. It lies 43 miles northeast from Montpelier, was granted November 7, 1780, and chartered to Uriah Seymour and others, by the name of Westford, August 17, 1781, containing 23,040 acres. The name was afterwards altered to Westmore. The township was surveyed in March, 1800, and the settlement commenced the same spring. The settlement was abandoned during the war of 1812, but resumed on the return of peace. This township is but little settled. The surface is uneven, and mount Hor, Pisgah and Pico are the most important summits. Willoughby's lake lies in this township, and is about six miles in length and one and a half wide. Its waters are discharged by Willoughby's river into Barton river. Some of the head branches of Clyde river and of the Passumpsic rise here. *Statistics of 1840.*—Horses, 12; cattle, 37; sheep, 62; swine, 38; wheat bush. 308; barley, 108; oats, 223; rye, 55; buckwheat, 223; Ind. corn, 55; potatoes, 2,350; hay, tons, 92; sugar, lbs. 48; wool, 114. Population, 122.

WEST RIVER.

WESTON.—WEYBRIDGE.

WHEELLOCK.

WEST RIVER. *See Wantasticook.*

WESTON, a post town in the southwest corner of Windsor county, is in lat. 43° 19' and long. 4° 14', and is bounded north by Mount Holly and Ludlow, east by Andover, south by Londonderry, and west by Mount Tabor and Landgrove. It lies 66 miles south from Montpelier, and 22 southwest from Windsor. This was formerly a part of Andover. It was set off in 1790, and organized March 3, 1800. Alvin Simons was the first town clerk, and also the first representative. The religious denominations are Congregationalists, Baptists, Methodists and Universalists. A meetinghouse, owned by the several denominations, was completed here in 1817. Jeremiah Blanchard is the most remarkable instance of longevity in this town. The epidemic of 1813 was very distressing here. West river passes through the township in a southerly direction, affording several good mill privileges. On the bank of this river are two small villages. The upper village is near the centre, and contains 2 meetinghouses, 2 stores, 1 clothier's works, 1 carding machine, 1 tannery, and 1 blacksmith. The town is divided into 12 school districts, 2 grist, 8 saw and 1 fulling mill, 2 stores, 2 taverns and 1 tannery. *Statistics of 1840.*—Horses, 120; cattle, 1,596; sheep, 3,111; swine, 432; wheat, bush. 1,159; barley, 779; oats, 5,453; rye, 302; buck-wheat, 1,025; Indian corn, 631; potatoes, 33,555; hay, tons, 2,776; sugar, lbs. 13,455; wool, 6,858. Population, 1,032.

WEYBRIDGE, a post town in the central part of Addison county, is in lat. 44° 2' and long. 4° 50', and is bounded north and east by Otter creek, which separates it from New Haven and Middlebury, south by Cornwall, and west by Bridport and Addison. It lies 80 miles north from Bennington, and 30 south from Burlington, and was chartered November 3, 1761, containing 8261 acres. The settlement was commenced about the beginning of the revolutionary war by David Stow and John Sanford, but the settlers were soon after dispersed or made prisoners by the enemy. The settlement was recommenced on the return of peace. The first settlers were mostly from Massachusetts. The religious denominations are Congregationalists, Baptists, Methodists and a few Friends. The Congregational church was organized June 20, 1794. The Rev. Jonathan Hovey was settled over it Feb. 10, 1806 to Dec. 9, 1816; the Rev. Eli Moody from Aug. 12, 1818 to Dec. 9, 1823; the Rev. Harvey Smith from March 6, 1825 to April 22, 1828 and the Rev.

Jonathan Lee from July 2d 1834 to May 24, 1837. This society erected a house for worship about the year 1802. Otter creek is the most important stream, and in it are here several falls which furnish fine mill privileges. Lemonfair river is a sluggish stream which runs through the western part of the township into Otter creek. Snake mountain lies mostly in the western part of the township. Near the paper mill is found earthy asbestos between layers of limestone which is the common rock in this township. A few years since a considerable body of land here slid into Otter creek, which completely stopped the water for some time, leaving the channel bare below, and altering materially the course of the stream, when it again commenced flowing. At one of the falls on Otter creek is a small village containing 1 store, 1 tavern, a woolen factory, &c. There are in town, 6 school districts, 3 saw mills, 1 grist mill, 1 paper mill 2 fulling mills, 1 woolen factory, 3 stores. *Statistics of 1840.*—Horses, 154; cattle, 1,595; sheep, 10,021; swine, 492; wheat, bush. 717; barley, 16; oats, 4,451; rye, 508; buck-wheat, 168; Indian corn, 4,808; potatoes, 14,215; hay, tons, 3,851; sugar, lbs. 896; wool, 28,989. Population, 797.

WHEELLOCK, a post town in the north part of Caledonia county, is in lat. 44° 33' and long. 4° 50', and is bounded north by Sheffield, east by Lyndon, south by Danville, and west by Greensborough. It lies 30 miles northeast from Montpelier, was granted and chartered to the president and trustees of Dartmouth college and Moore's charity school, June 14, 1785, containing 23,040 acres. It was named Wheelock in honor of Rev. John Wheelock, who was at that time president of Dartmouth college. A considerable part of the lands are held by lease. Jos. Page commenced the settlement of this township, in 1790. He was joined the next year by Abraham Morrill, from Danville, and also by Dudley Swasey. The town was organized March 29, 1792. The Free-will Baptist is the most numerous religious sect. A meeting house was erected here about the year 1798. The streams in this township are all small, but they afford several good mill privileges. There are two ponds. One, in the western part, covers about 100 acres, and discharges its waters into the Lamoille. On the outlet is one saw mill. The other is in the eastern part, covers about 50 acres, and discharges its waters into the Passumpsic. The eastern range of the Green Mountains passes through the western part of

WHEATSTONE BROOK.

WHITE CREEK.—WHITE RIVER.

WHITING.

the township, and is here called Wheelock mountain. In the eastern part are many good farms, but the land in the western part is cold and stony, and but little of it under improvement. The county road from Danville to Stanstead in Canada, passes through the eastern part. There are in town 12 school districts, three saw, one grist, and one fulling mill, one tannery, and one store. *Statistics of 1840.*—Horses, 264; cattle, 1,472; sheep, 4,787; swine, 1,007; wheat, bu. 1,967; barley, 903; oats, 11,070; rye, 26; buckwheat, 1,100; Ind. corn, 1,100; potatoes, 57,520; hay, tons, 3,334; sugar, lbs. 32,160; wool, 8,287. Population, 881.

WHEATSTONE BROOK, is a small mill stream, which rises in Marlborough and runs nearly east through Brattleborough into Connecticut river. It affords a considerable number of good mill privileges.

WHITE CREEK is formed in Rupert by the union of a number of small branches, and, taking a southwesterly course, unites with the Battenkill in Washington county, New York.

WHITE RIVER rises in Granville, and, running a southeasterly course through the northeast corner of Hancock, the south west part of Rochester, and the northeast corner of Pittsfield, enters Stockbridge. It then turns to the northeast, and, after running through the southeast corner of Bethel into Royalton, bears to the southeast through Sharon and Hartford, and falls into Connecticut river about five miles above the mouth of Otta Quechee river. From Granville this river runs slowly through a narrow tract of intervale till it arrives at the eastern part of Stockbridge, after which the current is very rapid till it reaches Bethel village. From Bethel to its mouth the channel of the river is from 16 to 18 rods in width, and the current generally rapid, and the water shallow. On account of its proximity to Otta Quechee river, White river receives no large tributaries from the south. Broad brook and Locust creek are the most important. From the north it receives three large branches, called the first, the second, and the third branch. The *first branch* rises in Washington near the head branches of Wait's and Winooski river and, running through Chelsea and Tunbridge, unites with White river in the eastern part of Royalton. The *second branch* rises in Williamstown in conjunction with Steven's branch of Winooski river, and running southerly through Brookfield and Randolph, enters White river a little west of the centre of Royalton. This stream runs with a gentle current through a narrow tract of fine intervale. The *third*

branch originates in Roxbury, runs thro' the corner of Granville, through Braintree and the corner of Randolph, and joins White river at Bethel village. Each of these streams is about 20 miles in length, and on each are several very good mill privileges, particularly on the latter, at Bethel village. White river is the largest stream in Vermont on the east side of the mountains. Its length is about 55 miles, and it waters about 600 square miles. This stream was known by the name of White river long before any settlements were made in Vermont.

WHITING, a post town in the south part of Addison county, is in lat. 43° 51' and long. 3° 53', and is bounded north by Cornwall, east by Otter creek, which separates it from Leicester and Salisbury, south by Sudbury, and west by Orwell and Shoreham. It lies 40 miles southwest from Montpelier, and 42 south from Burlington. It was chartered August 6, 1763, to Col. John Whiting, of Wrentham, Mass., from whom it derives its name, and contains about 9,000 acres.—John Wilson, from the same township, erected the first house in this township in 1772, and in June 1773, a family by the name of Bolster moved into it. In 1774, Mr. Wilson's and several other families moved here. During the revolution the settlement was abandoned, but was recommenced immediately upon its close, by those persons who had been driven off, and by others. Among the first settlers were a Mr. Marshall, Gideon Walker, Joseph Williams, Daniel Washburn, Joel Foster, Samuel Beach, Ezra Allen, Jehiel Hull, Henry Wiswell, and Benjamin Andrus. The town was organized in March 1785, and John Wilson was first town clerk. In 1786, Ebenezer Wheelock was chosen delegate to the convention for revising the constitution, and Samuel Beach was appointed representative to the General Assembly in 1788. The religious denominations are Baptists, Congregationalists, Methodists, and Universalists. Elder David Rathbun was ordained over the Baptist church in June, 1800, and continued three or four years. After this, the Rev. John Ransom preached here about two years. In January 1810 the Rev. Justin Parsons was settled over the Congregational church, and continued about three years. From 1821 Elder Joseph W. Sawyer was hired by the Baptist and Congregational societies for several years, and the two societies united in 1809 in erecting a meeting house, which was the next year consumed by fire, supposed to be the work of an incendiary. Other houses have since been erected. The dysentery

WHITINGHAM.

WILD BRANCH.—WILDERSBURGH.

WILLIAMS' RIVER.

prevailed here in 1803, and the epidemic of 1812 and 13 was very mortal. One person has lived in this town to be 100 years of age. Otter creek waters the eastern border of the township but affords no mill privileges. A saw mill, on a small stream, is the only mill in town. Otter creek, till lately, afforded no valuable fish. In the spring of 1819, Mr. Levi Walker, of Whiting, proposed to the inhabitants of this and the neighboring towns along the creek to transfer fish from the lake into the creek above Middlebury falls. The plan was carried into execution, and the fish have since multiplied exceedingly. In 1823 not less than 500 pounds of excellent pickerel were taken from the creek in the distance of two miles. Along the eastern part of the township, near Otter creek, is a swamp, which covers 2 or 3000 acres. It affords an abundance of excellent cedar, pine, ash, &c. The soil is generally of the marly kind, and produces good grass and grain. In 1810 Mr. Samuel H. Remmele had a field of five acres of wheat which averaged 50 bushels to the acre, and Mr. Benajah Justin for several years raised an annual crop of corn which averaged 100 bushels to the acre. The stage road from Burlington to Albany passes through the centre of the township. The town is divided into five school districts, with a school house in each. *Statistics of 1840.*—Horses, 181; cattle, 807; sheep, 10,323; swine, 390; wheat, bu. 1,232; barley, 136; oats, 2,600; rye, 236; buckwheat, 71; Ind. corn, 2,255; potatoes, 7,150; hay, tons, 2,837; sugar, lbs. 1,590; wool, 27,168. Population, 660.

WHITINGHAM, a post town in the southwest corner of Windham county, is in lat. 42° 47', and long. 4° 9', and is bounded north by Wilmington, east by Halifax, south by Heath and Rowe, Mass., and west by Reedsborough. It lies 18 miles southeast from Bennington, and 20 northwest from Greenfield, Mass., and contains 23,404 acres. The settlement was commenced in 1770, by a Mr. Bratlin and Silas Hamlington. In 1773, Messrs. Angel, Gustin, Nelson, Lamphire, and Pike, emigrants from Massachusetts and Connecticut, moved their families here. The town was organized March 23, 1780, and Eliphalet Hyde was first town clerk. Silas Hamlington was the first justice of peace, and first representative. The religious denominations are Baptists, Methodists, Universalists, and Congregationalists. There have been several instances of longevity. Mr. Benj. Cook died here in 1832, aged 106 years. His health and strength held out remarkably, and he cel-

ebrated his hundredth birth day by making a pair of shoes, without spectacles. In 1793 the canker rash was very mortal, and carried off one fourth of the children in town. The typhus fever prevailed in 1801, and was fatal to more than 40 adult persons. Many of the first settlers of this township had numerous families of children. Mr. Pike had 28 children, 10 by his first wife, and 18 by two others. Most of these lived to a mature age, and 19 of them were alive a few years since, the youngest of whom was 25 years old. Deerfield river runs through the whole length of the township, along the western part, fertilizing some handsome tracts of meadow. There are many other smaller streams in different parts. There are two natural ponds. *Sawodawda* pond is so called from an Indian of that name who formerly lived near it, and was afterwards supposed to have been drowned in going down Deerfield river. This pond has been gradually decreasing for 50 years past, by land forming over the water, which, to the extent of 70 or 80 acres, rises and falls with the waters of the pond. The surface of the township is uneven, but the soil is generally good, and is timbered with maple, beech, birch, ash, spruce and hemlock. A mineral spring was discovered here in 1822, which was analyzed by Doct. Wilson, and found to contain the following ingredients, viz: muriate of lime, carbonate of lime, muriate of magnesia, carbonate and per-oxyde of iron, alumina with an acid trace. It is said to be a specific for cutaneous eruptions, scrofulous humours, dropsy, gravel chronic ulcers, liver complaint, and a variety of other diseases. The western part of the township abounds with limestone, which is burnt extensively into lime.—The town contains a well finished meeting house, 50 by 55 feet on the ground, fourteen school districts, two grist mills nine saw mills, two fulling mills, five stores, one tavern, and one tannery. *Statistics of 1840.*—Horses, 267; cattle, 2,710; sheep, 3,997; swine, 989; wheat, bu. 1,154; barley, 375; oats, 5,137; rye, 822; buckwheat, 1,044; Ind. corn, 3,270; potatoes, 43,978; hay, tons. 4,999; sugar, lbs. 30,389; wool, 6,809. Population, 1,391.

WILD BRANCH originates in Eden, runs through the western part of Craftsbury, and unites with the river Lamoille in Wolcott.

WILDERSBURGH. Name altered to Barre, October 19, 1793. *See Barre.*

WILLIAMS' RIVER is formed in Chester, by the union of three considerable branches, which originate in small streams

WILLIAMSTOWN.

WILLISTON.

in the townships of Ludlow, Andover, Windham and Grafton. These three branches unite about a mile and a half to the southeast of the two villages in Chester, and their united waters, after running 15 miles in a southeasterly direction, fall into Connecticut river in Rockingham, three miles above Bellows Falls. Along this river is some fine intervalle, and it affords several good mill privileges. Williams' river derives its name from the celebrated Rev. John Williams, who was taken by the Indians at Deerfield, Mass., in 1704, and who, at the mouth of this stream, preached a sermon to his fellow captives.

WILLIAMSTOWN, a post town in the northwestern part of Orange county, is in lat. $44^{\circ} 6'$ and long. $4^{\circ} 28'$, and is bounded north by Barre, east by Washington, south by Brookfield, and west by Northfield. It lies 11 miles southeasterly from Montpelier, and 45 northwesterly from Windsor. It was granted November 6, 1780, and chartered August 9, 1781, to Samuel Clark and others, containing 23,040 acres. The settlement of this township was commenced in June, 1784, by Hon. Elijah Paine, John Paine, John Smith, Joseph Crane, and Josiah Lyman. Penuel Deming moved his family here in February, 1785, and this was the first family in town. Hon. Cornelius Lynde moved here in 1786. The town was organized September 4, 1787. Cornelius Lynde was the first town clerk, and Elijah Paine the first representative. The religious denominations are Congregationalists, Baptists, Methodists, Freewill Baptists, and Universalists. The Congregational church was organized in 1795, and now has 99 members. The ministers of this church have been the Revs. Jesse Olds, Nathan Waldo, Benton Pixley, Joel Davis and Andrew Royce. The Rev. J. Davis is the present minister. Their meeting house was built in 1812. The Baptist church consists of 90 members. The Rev. Friend Blood is their present minister. They built a new meeting house in 1839. The Methodist church consists of 152 members, and has a convenient chapel. The Universalists built a meeting house in 1835, and the Freewill Baptists one in 1841. Rev. Lester Warren is minister of the former, and Rev. Joshua Tucker of the latter. In August, 1839, a store was burnt in this town, with all its contents, by the spontaneous ignition and explosion of a hoghead of N. E. rum. The hoghead was about half full, 50 per cent. above proof. It exploded about 4 o'clock in the afternoon, and the store was so quickly enveloped in flames

that the people within had barely time to escape with their lives. There had been no fire in the store during the day, and the cause of the ignition was not ascertained. This township lies on the height of lands between Winooski and White rivers, and contains no large streams. A brook, which here runs down a steep hill towards the west, divides naturally, and while one part runs to the north, forming Steven's branch of Winooski river, the other runs to the south, forming the second branch of White river. The turnpike from Royalton to Montpelier passes along these streams, and is known by the name of the *Gulf Road*, on account of the deep ravine through which it passes in this township, near the head of the second branch. The hills here, upon each side of the branch, are very high and abrupt, and approach so near each other as hardly to leave space for a road between them. In this ravine a medicinal spring has recently been discovered which is thought to be equal to that at Clarendon. This township is timbered principally with hard wood, and the soil is well adapted to the production of grass. There is a small but pleasant village near the centre of the township, containing 2 or 3 meeting houses, 2 stores, 1 tavern, 1 tannery, several mills and mechanics' shops, and about 35 dwelling houses. There are in town 17 school districts and 16 school houses, 1 grist, 1 clover, 1 fulling and 8 saw mills. *Statistics of 1840.*—Horses, 474; cattle, 2,909; sheep, 11,433; swine, 1,960; wheat, bush. 3,712; barley, 232; oats, 26,530; rye, 518; buckwheat, 3,927; Indian corn, 4,528; potatoes, 85,066; hay, tons, 5,459; sugar, lbs. 33,451; wool, 20,555. Population, 1,620.

WILLISTON, a post town in the central part of Chittenden county, is in lat. $44^{\circ} 25'$ and long. $3^{\circ} 58'$, and is bounded north by Winooski river, which separates it from Essex, east by Jericho and Richmond, south by St. George, and west by Muddy brook, which separates it from Burlington. It lies 27 miles northwest from Montpelier, and was chartered June 7, 1763. It was called Williston in honor of Samuel Willis, one of the grantees. The settlement of this township was commenced in May, 1774, by Thomas Chittenden, who was joined in 1776, by Elisha Allen, Abijah Pratt, John Chamberlain and Jonathan Spafford. These families had, however, but just arrived, when the enemy advanced from Canada, and all the settlements in this part of the country were abandoned. John Chamberlain was attacked in his house by the Indians, and a hired man and a child were killed by

WILLOUGHBY'S RIVER.

WILMINGTON.

WINDHAM.

them. The settlers returned after the war, and in 1786 the town was organized. Robert Donnelly was the first town clerk, and Jonathan Spafford the first representative. The religious denominations are Congregationalists, Baptists, and Methodists. Rev. Aaron Collins was settled over the Congregational church January 29, 1800, and dismissed in 1803; Rev. James Johnson was settled in October, 1818, and dismissed in October, 1823; Rev. Josiah F. Goodhue was settled from May, 1824, to 1833; Rev. Jonathan Hurlbut from 1834 to 1838, and Rev. Simeon Parmelee since 1838. Their first meeting house, built in 1797, was taken down a few years ago, and a beautiful new one of brick, 40 feet by 60, erected. The other public buildings are a town house, of brick, 30 feet by 42, and an academy, of wood, 26 by 36, and two stories high. Mrs. Susannah Hart died here in 1830, aged 104 years, Mrs. Susannah Wells, about 1811, aged 104, and Mrs. Rachel Mann, aged 96. Mrs. Adocia Thatcher, a daughter of the latter, is now living here, aged 92, but she has not walked for 45 years. She has a sister in Stockholm, N. Y., 100 years old, who formerly resided here. There are 7 persons now living here who are over 84 years old, and 30 who are over 70. Gov. Thomas Chittenden died here Aug. 25, 1797. (*See part second, p. 85.*) Williston is a very fine farming township. The surface is diversified, but not mountainous. The soil is a rich loam, of a black or yellow color, and produces abundant crops. Winoski river washes the border of this township, and there are within it some small streams, on which mills have been erected, but there are only two which can be called good mill privileges. Williston contains 9 school districts, 6 saw mills, 4 stores, 2 taverns, and 2 tanneries. *Statistics of 1840.*—Horses, 421; cattle, 2,054; sheep, 13,035; swine, 1,465; wheat, bush. 2,726; barley, 40; oats, 19,970; rye, 2,064; buckwheat, 406; Ind. corn, 7,526; potatoes, 42,529; hay, tons, 4,926; sugar, lbs. 13,167; wool, 23,138. Population, 1,554.

WILLOUGHBY'S LAKE. *See Westmore.*

WILLOUGHBY'S RIVER issues from Willoughby's lake in Westmore, runs through the south part of Brownington, and unites with Barton river in the north part of Barton.

WILMINGTON, a post town in the western part of Windham county, is in lat. 43° 52' and long. 4° 9', and is bounded north by Dover and a part of Somerset, east by Marlborough, south by Whitingham, and west by Searsburgh. It lies

17 miles east from Bennington, and 46 southwest from Windsor. The settlement was commenced before the revolutionary war by emigrants from Massachusetts and Connecticut, but the settlement was, for several years, retarded in consequence of the township having been twice chartered by New-Hampshire, to different proprietors, first by the name of Wilmington, and afterwards by the name of Draper. The first charter was dated April 25, 1751, and the second June 17, 1763. The Congregational church was organized here in 1780 and has had the following ministers, Rev. Winslow Packard from July 3, 1781 to Oct. 12, 1784; Rev. Jonas Hatch from March 7, 1787 to Feb. 18, 1791; Rev. E. Fairbanks from Sept. 11, 1793 to Jan. 3, 1800; Rev. Alvan Tobey from Sept. 1803 to Oct. 18, 1810; Rev. Wm. B. Stow from July, 1812 to Oct. 19, 1814; Rev. Joel Wright from Oct. 28, 1829 to Jan. 2d, 1834; and Rev. Geo. Butterfield the present minister settled June 5, 1839. The other denominations are Baptists, Methodists and Universalists. The Rev. Mansfield Bruce is minister of the Baptist church. The east and west branch of Deerfield river unite in this township, and there are two other considerable streams called Beaver and Cold brook. There is one large natural pond, called Ray's pond, on the outlet of which is a grist mill. There is also a grist mill on a branch of Deerfield river. There are in town 12 school districts and school-houses, 2 grist, 8 saw and 1 fulling mill, 1 carding machine, 1 trip-hammer, 2 taverns, 4 stores and 2 tanneries. *Statistics of 1840.*—Horses, 253; cattle, 3,044; sheep, 2,920; swine, 1,133; wheat, bush. 1,152; oats, 8,962; rye, 895; buckwheat, 737; Indian corn, 1,618; potatoes, 66,110; hay, tons, 4,991; sugar, lbs. 81,159; wool, 5,419. Population, 1,296.

WINDHAM, a post town in the northwestern part of Windham county, is in lat. 43° 11' and long. 4° 19', and is bounded north by Andover, east by Grafton, south by Jamacia, and west by Londonderry. It lies 31 miles northeast from Bennington, and 25 southwest from Windsor. This town was formerly a part of Londonderry. It was set off, and with the addition of a small gore of land called Mack's Leg, was constituted a separate township by the name of Windham. Among the first settlers of this township were Edward Aiken, James McCormick and John Woodburn. It was organized immediately after the division. The religious denominations are Congregationalists, Baptists, Methodists and Universalists. The Rev. John Lawton was set-

WINDHAM COUNTY.

WINDSOR.

tled over the Congregational church Oct. 4, 1809, and dismissed Oct. 1819. The Rev. S. R. Arms, the present minister, was settled Jan. 5, 1825. There are two Congregational meeting houses, one in the north part and the other near the centre. The latter was built about the year 1807, and the other a little before. The Rev. M. D. Miller is minister of the Baptist church. The line, between this township and Londonderry, runs along the summit of a considerable mountain. The streams are all small, and consist of branches of Williams', Saxton's and West river. In the northwest part of the town is a considerable pond. The most important minerals found in this township are actynolite, chlorite, garnets, serpentine, steatite and talc. The actynolite is found about two miles from the south meeting-house, on the road leading to Grafton. It is in slender four sided prisms of a leek green color. Some of the crystals are five or six inches in length, and they vary from a hundredth of an inch to an inch in breadth. These crystals are embedded in talc, and are very abundant. Besides actynolite and talc at this locality, within the compass of a few feet, are found common serpentine, amianthus and ligniform and earthy asbestos. The town is divided into eight school districts with a schoolhouse in each. There are also, 1 grist mill, 7 saw mills, 2 stores, 1 tavern and one tannery. *Statistics of 1840.*—Horses, 159; cattle, 1,829; sheep, 5,702; swine, 781; wheat, bush. 1,378; barley, 518; oats, 5,177; rye, 894; buck-wheat, 561; Indian corn, 1,434; potatoes, 36,083; hay, tons, 2,723; sugar, lbs. 15,830; wool, 11,722. Population, 757.

WINDHAM COUNTY, lies in the southeast corner of the state. It is situated between 42° 44' and 43° 16' north lat. and between 4° and 4° 42' east long., being 36 miles long from north to south, and 28 wide from east to west, and containing about 780 square miles. It is bounded north by Windsor county, east by Connecticut river, which separates it from Cheshire county, N. H., south by Hampshire county, Mass., and west by Bennington county. This county was incorporated by the name of Cumberland, February 11, 1789. Newfane, lying near the centre, is the seat of justice. The Supreme Court sits here on the 3d Tuesday after the 4th Tuesday in January, and the County Court on the 2d Tuesday in April and September. There are several pleasant villages in this county, the most important of which are Brattleborough, Bellows Falls and Fayetville. In the latter situated in New Fane are the county

buildings. Connecticut river washes the eastern border, Williams' and Saxton's river water the northeastern part, West river, the central part, Deerfield river, the southwestern part. The tract, embraced within the county of Windham, is hilly and uneven, and, in the western part, mountainous. Its geological features, though distinctly marked, are very irregular. Few continuous ranges can be traced with certainty, and many sections, especially the western, have not as yet been particularly explored. The geological character of the county is uniformly primitive. The western part is of the oldest and the eastern of more recent formation. *Statistics of 1840.*—Horses, 4,969; cattle, 42,661; sheep, 114,336; swine, 29,435; wheat, bush. 23,796; barley, 8,129; oats, 178,761; rye, 33,502; buck-wheat, 13,387; Indian corn, 139,923; potatoes, 743,366; hay, tons, 70,398; sugar, lbs. 423,400; wool, 222,260. Population, 27,431.

WINDMILL POINT. See *Alburgh*.

WINDSOR, a post town in the eastern part of Windsor county, is in lat. 43° 29' and long. 4° 29', and is bounded north by Hartland, easterly by Connecticut river, which separates it from Cornish, N. H., south by Weathersfield, and westerly by Reading. It lies 55 miles southeast from Montpelier, 55 northeast from Bennington, 95 from Boston, and 420 from Washington. It was chartered to Samuel Ashley and 58 others, July 6, 1761, containing, by charter, 23,500 acres. The proprietors immediately organized themselves under this charter, and proceeded to survey, make a plan of, and allot the town. The first permanent settlement in the town was commenced by Captain Steele Smith, who removed his family from Farmington, Ct., to this town, in August, 1764. At that time there was no road north of Charleston, N. H. The next season Maj. Elisha Hawley, Capt. Israel Curtis, Dea. Hez. Thompson, Dea. Thos. Cooper, and some others, came on and began improvements. There was, however, a man by the name of Solomon Emmons, and his wife, who had erected a hut, and were living here when Captain Smith arrived, but he had not purchased the land, or made any improvements with a view to a permanent settlement. Mrs. Emmons was the first and for some time the only white woman, who resided in the town. She was for many years supported by the town, and died about 1833. She was for a number of years the only midwife for many miles around. Mr. Samuel Smith, who recently died in town, aged 77 years, a son of Capt. Steele

WINDSOR.

WINDSOR.

Smith, was the first child born. The town was rapidly settled, and was soon organized, though the records do not show the time when. Dea. Thomas Cooper was the first town clerk. During the controversy between the government of New York and New Hampshire, respecting the jurisdiction of the territory now forming the state of Vermont, the proprietors of Windsor became alarmed for their title, and conveyed their respective rights of land, in trust, to Col. Nathan Stone, who surrendered the same to Wm. Tryon, the Governor of the Province of New York, who regranted the township to Col. Stone and 28 others, by Letters Patent, dated March 28, 1772. Both these Royal grants reserved one whole share for the Propagation Society, one share for the first settled minister of the gospel, one for a glebe for the Church of England, and one for the benefit of a public school in town. From what few of the proprietors' records are now remaining, it appears that the public lots were drawn and set apart, according to a plan or map of the town, then in existence, previous to the regrant of 1772. But after that grant, the old plan seems to have disappeared, and a new one was substituted, in which all the public rights are located on the most barren and inaccessible part of Ascutney mountain; so that they are of no value to the town. At an early period, two religious societies of the Congregational order were formed in Windsor, one in the east and the other in the west parish of the town. About the year 1778, the Rev. Martin Tuller and the Rev. Pelatiah Chapin were ordained the first ministers over their respective churches in those parishes. The Rev. Samuel Shuttleworth succeeded Mr. Tuller, as the pastor of the Congregational church in the east parish, who was ordained June 23, 1790. His successors have been Rev. Benj. Ball, Rev. Bancroft Fowler, Rev. John Wheeler, Rev. Geo. Wilson, and Rev. Thomas Kidder. The latter was recently dismissed. The Congregational church in the west parish has been for some time vacant. There is also a small Baptist church in the west parish, of which Elder Samuel Lawson is the pastor. In 1813 a Baptist church and society was formed in the east parish. Rev. Joshua Bradley was the first pastor over this church. He has been succeeded by the Rev. Leland Howard, the Rev. Romeo Elton, and the Rev. Elijah Hutchinson, who is the present pastor. An Episcopal church, by the name of *St. Paul's church*, was organized here Nov. 25, 1816, under the temporary ministry of the Rev. Dr. Morse. The ministers of

this church have been Rev. Dr. Chapman, in 1818, who was succeeded by the Rev. George Leonard, who continued till 1829; Rev. Wm. Horton, who officiated from 1829 to 1835; Rev. Darius Barker, from 1836 to 1838; and Rev. O. H. Staples, from 1838 to 1841. The Rev. W. D. Wilson is the present minister. The church edifice is of brick, in Grecian style, and was consecrated Nov. 20, 1822. It has a good organ and bell. In 1793 the town was divided into two distinct parishes, by an act of the Legislature. In 1814, these two parishes were, by an act of the Legislature, erected into two distinct towns, by the names of Windsor and West Windsor, with the right in each to send a representative to the General Assembly. The next year, however, the party excitement which had induced that measure, having in some degree subsided, they were reunited again into one town, under the ancient name of Windsor. This town is hilly, but it is well watered by small streams, and the soil is fertile. Nearly all the tillageable land in town is settled; but is capable of subsisting a much denser population than it does at present. The principal stream in town is Mill brook. It rises in the westerly part of Reading, and after an easterly course of about 15 miles, it falls into Connecticut river at the south end of Windsor village. It affords a variety of mill seats. Ascutney mountain is situated partly in Weathersfield and partly in Windsor: the line between the towns passing across the apex of the mountain. *See Ascutney.* The timber of this township is principally sugar maple, white maple, birch, ash, walnut, red oak, butternut, basswood, white pine, spruce, and hemlock. *Windsor village* is situated on the west bank of Connecticut river, about equi-distant from the north and south lines of the township. It is built on the westerly side of the meadow, which here is large and beautiful, about one fourth of a mile from the river, between Mill brook on the south and southwest, and the Pulk-hole brook, so called, which terminates it on the north and northwest. These two streams approach very near to each other on the west side of the village, leaving but a narrow isthmus between them; then suddenly turning, the one to the south, and the other to the north, they diverge to the extent of a mile, and then both turning easterly, they fall into the Connecticut. It is through this isthmus that the main roads from Reading, and the west parish of Windsor, and the road from Woodstock, which form a junction a little west of the village, enter it.

WINDSOR.

WINDSOR COUNTY.

WINHALL

The site of the village is uneven, and the main street, which passes through it from north to south, is serpentine, making no less than four very obtuse angles within the village; the effect of which is, that not more than about one third of the village can be seen from any one point of view. The village contains about 125 dwelling houses. It is rather compactly built, and several of the houses are elegant. The place is much adorned with trees and shrubbery, which, united with the hill prospect around, and a fine view of Ascutney mountain, which lies 3 miles southwest of it, render it one of the most pleasant villages in this part of the country. The public buildings are three houses for public worship, a court house, where the U. S. Circuit and District Courts meet annually, on the 21st and 27th of May; the state prison; and a seminary for young gentlemen and ladies. The latter is under the charge of Messrs. J. Swett, Jr. and Alonzo Jackman. For the purpose of affording the village the advantages of water power, in 1835 a stone dam was constructed across Mill brook, half a mile from its mouth. It is 360 feet in length, 56 in breadth at the base, 12 at the top, and 42 feet in height, forming a reservoir of water nearly one mile in length, with a surface of 100 acres, having an available fall of 60 feet in the distance of one third of a mile. The dam is built on the arc of a circle, over which, in flood time, the water flows in an unbroken sheet 102 feet in length, forming one of the most beautiful cascades in the country. The village contains at present 1 grist mill, 1 saw mill, 2 tanneries, a post office, 3 taverns, 4 lawyers, 4 physicians, a printing office, at which is published the Vermont Chronicle, by Bishop & Tracy, 9 stores of different kinds, and the usual variety of mechanics' shops. Many of the houses are elegant, and the village is rendered delightful by the shade-trees, shrubbery, and fine gardens. The garden of Hon. Horace Everett offers one of the best specimens of horticultural taste and skill in this section of the country. There are two small villages in the west parish, called *Brownsville* and *Sheddsville*. The former has a meeting house, occupied by the Methodists, 2 stores, 1 tavern, 1 saw mill, and several mechanics' shops. The latter has a meeting house, occupied by the Freewill Baptists and Universalists, 1 store, 1 tavern, 1 tannery, 1 shoe shop, &c. *Statistics of 1840.*—Horses, 501; cattle, 2,428; sheep, 12,429; swine, 1,244; wheat, bushels, 2,864; barley, 103; oats, 15,822; rye, 4,077; buck-

wheat, 1,847; Indian corn, 12,920; potatoes, 61,075; hay, tons, 5,673; sugar, lbs. 18,320; wool, 25,343. Population, 2,744.

WINDSOR COUNTY is situated on the east side of the Green Mountains, between 43° 13' and 43° 56' north lat. and between 4° 7' and 4° 45' east long. being 48 miles long from north to south, and 30 wide from east to west, and containing about 900 square miles. It is bounded north by Orange county, east by Connecticut river, which separates it from Grafton and Cheshire counties, N. H., south by Windham county, and west by Rutland county. This county was incorporated in February, 1781. Woodstock, situated near the centre of the county, is the seat of justice. The supreme court sits here the 4th Tuesday next following the 4th Tuesday of January, and the county court on the last Tuesday in May and November. There are several pleasant villages in the county, the most important of which are Windsor, Woodstock, Norwich, and Royalton. White river runs across the north part of the county, Quechee river through the central part, and Black river through the south part. Some of the head branches of West and Williams' rivers rise in the southwestern part. The surface of this county is uneven, but the soil is generally of an excellent quality, producing fine crops of grass, corn, and grain. A range of talco-argillaceous slate passes through the western part of the county, in which several quarries of excellent steatite or soap stone have been opened, particularly in Plymouth, Bridgewater, and Bethel. In the southeastern part is an abundance of excellent granite, and primitive limestone abounds in the southwestern part, where it is extensively manufactured into lime, particularly in Plymouth. The rocks in the other parts are principally gneiss, mica slate, and hornblende. A range of argillaceous slate extends into the northwestern part of the county. The mica and talcose slate, in many places, abounds with garnets. *Statistics of 1840.*—Horses, 8,440; cattle, 51,863; sheep, 234,826; swine, 22,834; wheat, bu. 56,659; barley, 5,164; oats, 301,096; rye, 46,126; buckwheat, 49,380; Ind. corn, 168,897; potatoes, 1,072,753; hay, tons, 107,109; sugar, lbs. 462,444; wool, 552,770. Population, 40,359.

WINHALL, a post town in the eastern part of Bennington county, is in lat. 43° 10' and long. 4° 7', and is bounded north by Peru, east by Jamaica and a part of Londonderry, south by Stratton, and west by Manchester. It lies 25 miles northeast from Bennington, 33 southwest from Windsor, and was chartered September

WINOOSKI RIVER.

WOLCOTT.

15, 1761, containing by charter 23,040 acres. Mr. Nathaniel Brown, from Massachusetts, commenced the settlement of this township, during the revolutionary war. The town was organized about the year 1796. Asa Beebe jr. was first town clerk, and Asa Beebe was first representative. The religious denominations are Congregationalists, Methodists, and Baptists. The Rev. B. Barrett was settled over the Congregational church about the time the town was organized, who died about two years after. There has been no settled minister since. There is a small union meeting house situated near the centre of the township, and another in the eastern part, belonging to the Congregationalists and Baptists. The Congregationalists are supplied by the preceptor of Burr Seminary, and the Methodists by circuit preachers. The town is watered by Winhall river which affords a great number of good mill privileges. There are in town five school districts, and four school houses, one grist and seven saw mills, one store, three taverns, and one tannery. *Statistics of 1840.*—Horses, 172; cattle, 693; sheep, 815; swine, 279; wheat, bu. 579; oats, 2,775; rye, 366; buckwheat, 647; Ind. corn, 564; potatoes, 17,388; hay, tons, 1,466; sugar, lbs. 11,000; wool, 1,590. Population, 576.

WINHALL RIVER is a small mill stream which is collected in Winhall, and, after running easterly through the corner of Jamaica, unites with West river in the south part of Londonderry.

WINOOSKI RIVER, called also Onion river, is formed in Cabot by the union of several small streams, and taking a southerly course, enters Marshfield where it receives a large tributary from the east, which originates in Onion river pond in Peacham and in Molly's pond in Cabot. On this stream is a remarkable cataract, where the water falls about 500 feet in the distance of 30 rods. Through Marshfield, the river continues a southerly course into Plainfield, where it bends to the southwest and crosses the corner of the township into Montpelier. Here it receives Kingbury's branch, from Calais. After crossing the southeast corner of Montpelier, the river takes a northwesterly course, which it continues till it falls into lake Champlain, between Colchester and Burlington, five miles north of Burlington village. Its most considerable tributaries are Dog river and Steven's branch in Berlin, North branch at Montpelier village, Mad river in Moretown, Waterbury river in Waterbury, Huntington river in Richmond, and Muddy brook between Williston and Burlington. The alluvial

flats along this river are narrow, till the river has passed through the western range of the Green Mountains, when they become much more extensive. In Bolton, where it passes the range, the mountains approach very near the river. The channels which have been worn in the rocks by this river are a great curiosity. One of these between Middlesex and Moretown, is about 80 rods in length, 60 feet in width, and 30 feet deep; the rock appearing like a wall on each side. Another of these channels is between Waterbury and Duxbury, four miles below Waterbury village. Its depth is about 100 feet, and the rocks on the south side are perpendicular. The rocks have here fallen into the chasm and formed a *natural bridge*, which is crossed by footmen at low water. Among the rocks here, are also, several curious caverns. Holes also of cylindrical form, are here worn into the solid rocks several feet in depth. This chasm is but a few steps from the turnpike leading from Montpelier to Burlington, and is worthy the attention of the curious traveller. A third channel of this kind is between Burlington and Colchester, about three fourths of a mile above Winooski lower falls. The channel here is about 40 rods in length, 70 feet in width, and 65 feet deep. Across the channel a bridge has been thrown which is perfectly secure from floods. There is abundant evidence, both here and at the natural bridge above mentioned, that there formerly existed a large pond at each place, whose waters were drained off by the wearing down of the channels. In Winooski river are several falls which afford excellent sites for mills. The turnpike from Burlington eastward along this river affords the best passage of the Green Mountains in the State. Winooski river is one of the largest in the State, being about 70 miles in length, and watering 970 square miles.*

WOLCOTT, a post town in the east part of Lamoille county, is in lat. 44° 34' and long. 4° 31' and is bounded north by Craftsbury, east by Hardwick, south by Elmore, and west by Hydepark. It lies

* *Winooski* is an Indian name, composed of two words in the Abinaqui, or Algonquin tongue, *wi-nees*, onions, or leeks, and *ki*, land, so that its literal signification is land of onions. The spelling comes to us through the French, and the *i* having the sound of long *e*, it is pronounced *Wenoeskee*. Considering the Indian name preferable, in every respect, to its translation, *onion*, we have given it the preference through the whole of our work, and we hope the time is not distant when it will be in general use. During the colonial wars the French and Indians often made their descent upon the English through the valley of this river, and hence it was often called *French River*.

WOODFORD.

37 miles northeast from Burlington, and 22 nearly north from Montpelier. It was granted November 7, 1780, and chartered to Joshua Stanton and others, August 22, 1781, containing 23,040 acres. The township is but thinly settled. It is watered by the river Lamoille, which runs through it from east to west, and by several of its branches, among which Green river and Wild branch are the most considerable. There is in the eastern part a large natural pond called Fish pond. There are in town one store, one tannery, one grist and five saw mills. *Statistics of 1840.*—Horses, 195; cattle, 907; sheep, 1,937; swine, 493; wheat, bu. 1,733; barley, 142; oats, 7,530; rye, 460; buckwheat, 136; Ind. corn, 2,040; potatoes, 30,101; hay, tons, 1,728; sugar, lbs. 32,565; wool, 4,025. Population, 824.

WOODBURY. Name altered to Monroe, Nov. 5, 1838. *See Monroe.*

WOODFORD, a township in the central part of Bennington county, is in lat. 42° 52' and long. 4°, and is bounded north by Glastenbury, east by Searsburgh and a part of Reedsborough, south by Stamford, and west by Bennington. It lies 24 miles west from Brattleborough, 50 south from Rutland, and was chartered March 6, 1753, containing, by charter, 23,040 acres. This township began to be settled immediately after the revolutionary war, but the progress of the settlement has been slow. The religious denominations are Congregationalists and Methodists. This township is watered principally by the head branches of Walloomscoik river, the largest of which originates near the centre in a pond which covers about 100 acres. A branch of Deerfield river rises from a small pond in the northeast part. The township is mountainous, and much of it incapable of settlement. It is well timbered with beech, maple, birch, spruce, hemlock, &c. The turnpike from Bennington to Brattleborough passes through the south part. There are in town three school districts, one grist and three saw mills, and one tannery. *Statistics of 1840.*—Horses, 73; cattle, 219; sheep, 133; swine, 96; oats, 105; buckwheat, 27; Ind. corn, 40; potatoes, 1,900; hay, tons, 193; sugar, lbs. 515; wool, 350. Population, 487.

WOODSTOCK, a post town and capital of Windsor county, is in lat. 43° 36' and long. 4° 27', and is bounded north by Pomfret, east by Hartland, south by Reading, and west by Bridgewater. It lies 11 miles northwest from Windsor, 46 south from Montpelier, and 428 from Washington, D. C. It was chartered July 10, 1761, and contains 26,017 acres. The

WOODSTOCK.

settlement of this township was commenced by Mr. James Sanderson, who moved his family here about the year 1768. He was soon joined by other settlers, and, in May, 1773, the town was organized, and Joab Hoisington was chosen town clerk. The whole number of families in 1774 was 14. Major Joab Hoisington was the first settler in that part of the town afterwards called the "Green." In 1776, he built a grist mill, and soon after, a saw mill, on the South branch of Quechee river, near the spot where the county jail now stands. These were the first mills erected in town, and, previous to this time, the inhabitants were obliged to carry their grain to Windsor, and, sometimes, to Cornish, N. H., to be ground. Doct. Stephen Powers was the first resident physician. In 1774 he removed to this township from Middleboro', Plymouth co., Mass., and erected the second log house on the "Green." During the revolutionary war, the progress of the settlement was much retarded. There were at this time scarcely any inhabitants in the state to the north and northwest of this township, and the settlers here were subject to frequent alarms by reports that the Indians were coming upon them, at which times they usually secreted their most valuable effects in the woods. The early inhabitants also suffered much by the ravages of the wild beasts. In order to preserve their young cattle and sheep from the bears and wolves, they were, for some years, compelled to guard them during the night, or shut them up in yards, or buildings, prepared for the purpose. The Rev. George Daman was ordained over the Congregational church here about the year 1782, and was the first settled minister. Previous to this, the Rev. Aaron Hutchinson preached for some time in Woodstock, Hartland and Pomfret, alternately. This town was divided into two parishes, called the north and south parish, by an act of the legislature passed March 1, 1784. The Congregational church, in the north parish, erected a meeting house in 1806, which was finished in 1808. April 25, 1810, they settled the Rev. Walter Chapin, who continued pastor till his death, July 22, 1827. His successors have been the Rev. John Richards, the Rev. Robert Southgate, and the Rev. Worthington Wright. The latter, who is the present pastor, was installed Feb. 14, 1838. The other religious denominations are Christians, Methodists, Episcopalians and Universalists. The Christian society is large, and has been for more than 20 years under the care of Elder Jasper Hazen. The

WOODSTOCK.

liturgy of the Episcopal church was first used here by the Rev. Joel Clap, Nov. 20, 1825. Jan. 27, 1826, a parish was organized by the name of *St. James' Church*, and a neat church edifice was erected in 1827, which was consecrated June 28, 1828. The Rev. Joel Clap officiated here from Nov. 20, 1825 to July 15, 1832; the Rev. B. C. C. Parker from October, 1832 to May, 1839; the Rev. John Grigg from May, 1839 to Easter, 1840, and June 1st, 1840, the Rev. Joel Clap again took charge of the parish, and is the present rector. Communicants 65. The Universalist and Methodist societies are large, but we are unable to give particulars. The epidemic of 1811 and '12 was very distressing here, and fatal to many of the inhabitants. Woodstock is one of the best farming townships in the state. The surface is pleasantly diversified with hills and vallies, and the soil is generally of a good quality, and easily cultivated. This township is watered by Otta Quechee river, which runs through it in a north-easterly direction, and by two of its branches, one on the north side and the other on the south. That on the north is called Beaver brook, and originates in the north part of Bridgewater, and in the south part of Barnard and Pomfret, and affords two or three good mill seats in this township. The south branch affords good mill privileges at both the villages, and there are mills erected upon it in two or three other places. But the best situations for water power are on Otta Quechee river. There are two dams constructed across this stream, but a short distance above the village, on which mills and other machinery are erected, and another near the spot where the river leaves the township, at which is one of the most extensive and successful manufactories of scythes, clothiers' shears, axes, and other edged tools, in the state, carried on by Mr. Daniel Taft and sons. There are two pleasant villages, known by their post office designations, Woodstock, and South Woodstock. The *village of Woodstock* is the largest in the county. It is built on both sides of Otta Quechee river, and contains about 350 buildings, mostly situated around a beautiful park, and about 1,400 inhabitants. The public buildings are a handsome court house, (*see part second, p. 122,*) and a strong jail, 5 houses for public worship, Congregational, Christian, Episcopalian, Universalist and Methodist, and the Vermont Medical College, (*see part second, p. 165.*) The business of a large tract of country centres at this village; and for the variety and extent of its manufactures and its

WORCESTER.

mercantile transactions, this village ranks as one of the first in the state. Among the manufactories, that of Messrs. R. Daniels & Co., for the manufacture of carding machines, jacks, shears, and all other articles used in woollen factories, is deserving of particular notice, both on account of the amount of business and the excellency of the work. There are in this village 5 resident clergymen, 12 attorneys, 6 physicians, 2 printing offices, at which newspapers are printed, and 20 dry goods, grocery, and other stores. *South Woodstock* is situated 5 miles south of the court house, on the road to Springfield, and contains a handsome meeting house, 2 stores, 2 physicians, and a number of mechanics. There are in town 18 school districts, 3 grist, 5 saw and 3 fulling mills, 2 woollen factories, 3 tanneries and 2 printing offices. *Statistics of 1840.* Horses, 621; cattle, 5,719; sheep, 15,974; swine, 1,655; wheat, bush. 4,671; oats, 28,879; rye, 1,426; buckwheat, 3,900; Indian corn, 15,141; potatoes, 82,584; hay, tons, 8,374; sugar, lbs. 32,072; wool, 39,072. Population, 3,315.

WORCESTER, a township in the north-western part of Washington county, is in lat. 44° 24' and long. 4° 25', and is bounded north by Elmore, east by Calais, south by Middlesex, and west by Stow. It lies 10 miles north from Montpelier, and 31 east from Burlington. It was chartered to Joshua Mason and associates June 8, 1763, and contains 23,040 acres. The settlement was commenced in 1797, by George Martin and John Ridlan, emigrants from Kennebec, Maine. The town was organized March 3, 1803, and John Young was the first town clerk. It was first represented in the general assembly in 1808. When the cold seasons commenced, the inhabitants abandoned the township, and in 1816 there were but three families here. In 1820, there were 44 inhabitants, and in March, 1821, the town was reorganized, it having, some time before, lost its organization, and Mr. Amasa Brown was chosen town clerk. A Congregational church was gathered here in February, 1824. and then consisted of 12 members. There are also Free-will Baptist and Methodist societies here. The township is watered by the north branch of Winooski river, which rises in Elmore about four miles from the Lamoille, and unites with Winooski river at the village of Montpelier. On this stream are here several good mill privileges, on several of which are saw mills. This stream opens a convenient passage for a road through the height of lands between Winooski river and the Lamoille. The

NAMES OF TOWNS ALTERED.

surface of the township is uneven, and along the western part is a considerable mountain. The town is divided into 7 school districts. *Statistics of 1840.*—Horses, 79; cattle, 244; sheep, 589;

swine, 168; wheat, bush. 883; barley, 151; oats, 4,002; rye, 267; buckwheat, 775; Indian corn, 1,386; potatoes, 3,305; hay, tons, 415; wool, 267. Population, 587.

List of Towns the names of which have been altered.

Flamstead to New Flamstead,	Nov. 3, 1761	Medway to Parkerstown,	Nov. 7, 1804
New Flamstead to Chester,	July 14, 1766	Hopkinsville to Kirby,	Oct. 28, 1807
Kent to Londonderry,	April 20, 1780	Middle Hereto Grand Isle,	Nov. 5, 1810
Hertford to Hartland,	June 15, 1782	Billymead to Sutton,	Oct. 19, 1812
Neshobe to Brandon,	Oct. 20, 1784	Lutterloh to Albany,	Oct. 30, 1815
Turnersborough to Chelsea,	Oct. 13, 1788	Duncansborough to Newport,	Oct. 30, 1816
Moretown to Bradford,	Oct. 23, 1788	Huntsburgh to Franklin,	Oct. 25, 1817
Pocock to Bristol,	Oct. 21, 1789	Navy to Charleston,	Nov. 16, 1825
Minden to Craftsbury,	Oct. 27, 1790	Parkerstown to Mendon,	Nov. 6, 1827
Tomlinson to Grafton,	Oct. 31, 1791	Minehead to Bloomfield,	Nov. 9, 1830
Hungerford to Sheldon,	Nov. 8, 1792	Vineyard to Isle la Motte,	Nov. 6, 1830
Wildersburgh to Barre,	Oct. 19, 1793	Kellyvale to Lowell,	Nov. 1, 1831
New Hunting'n to Hunting'n,	Oct. 27, 1795	Random to Brighton,	Nov. 3, 1832
Saltash to Plymouth,	Feb. 23, 1797	Kingston to Granville,	Nov. 6, 1834
Littleton to Waterford,	March 9, 1797	Woodbury to Monroe,	Nov. 5, 1838
Killington to Sherburne,	Nov. 4, 1800	Coventry to Orleans,	Nov., 1841
Caldersburgh to Morgan,	Oct. 19, 1801	Westford to Westmore,	
Hinsdale to Vernon,	Oct. 21, 1802	Draper to Wilmington,	
Isle la Motte to Vineyard,	Nov. 9, 1802	Socialborough to Clarendon,	
Missisco to Troy,	Oct. 26, 1803	Harwich to Mount-Tabor,	
Bromley to Peru,	Feb. 3, 1804		

APPENDIX

TO

THOMPSON'S VERMONT.

NATURAL HISTORY

Topography.

When the History of Vermont, to which this is an Appendix, was published, in 1842, the boundary line between the United States and the British provinces was unsettled, and in dispute between the two governments; but in the latter part of the summer of that year, the matter was amicably arranged by a treaty, formed by Mr. Webster and Lord Ashburton, and ratified by the two governments. The northern boundary of the state was intended to be along the 45th parallel of latitude, and was supposed to be on that parallel till the survey of 1818 proved the 45th parallel to be some distance to the southward of what had been previously regarded as the northern boundary of the state, cutting off a strip through the whole width, varying from one-fourth of a mile to a few rods. By the treaty, the northern boundary of the state was established upon the old well known line, without reference to the 45th parallel. This line was marked in 1845, by cutting away the timber, where it passed through forests, and by putting up cast iron posts at short distances through its whole length.

The geological explorations and the railroad surveys, which have been made during the last ten years, have added much to our knowledge of the general topography of the

state, and many objects of interest and value have been brought to light. Remeasurements have been made of several of our principal mountain summits, and their altitudes ascertained with greater accuracy, probably, than before, and a number of important peaks have, within that period, been measured for the first time.

In addition to these measurements of isolated mountain summits, there have been reconnoissances and surveys made, in almost every direction, through the state, for the location of the various railroads which have been built, or are now building. The profiles of these roads, together with the profiles of the canal routes, which had been surveyed previously, have furnished the means for giving a very tolerable exhibition of the elevation above the sea, of the principal places and most interesting objects in the state.

In the following list of altitudes, those of mountain summits are all derived from Barometrical measurements. The others are in part Barometrical; but they are derived principally from the various surveys for canals and railroads. Minute accuracy in these altitudes above the sea, cannot be expected. They are, however, believed to be a near approximation to the truth, and to show with sufficient exactness the relative elevation of the different places and objects.

MOUNTAIN SUMMITS.

MOUNTAIN PASSES.

VILLAGES.

LAKES AND PONDS.

ALTITUDES ABOVE THE OCEAN.

Mountain Summits.

Feet.

Chin, Mansfield, Thompson, 4348

Nose, " " 4044

South Peak, " " 3882

Camel's Hump, Duxbury, " 4083

Jay Peak, Adams, 4018

Shrewsbury Peak, 4086

Killington " Sherburne, Partridge, 3924

Equinox, Manchester, " 3706

Ascutney, Windsor, " 3320

Snake Mt., Bridport, Adams, 1310

Buck Mt., Waltham, " 1085

Sugar Loaf, Charlotte, Thompson, 1003

Snake Hill, Milton, " 912

Cobble, " " 827

Passes over the Green Mountains.

Lincoln, Adams, 2415

Granville, " 2840

Pern, " 2115

Sherburne, Partridge, 1882

Walden, De Witt Clinton, 1615

Mt. Holly, (R. Road) Gilbert, 1415

Roxbury, (R. Road) 997

Williamstown, Johnson, 908

Villages.

Burlington Town House, Benedict, 202

" University, " 367

Milton Falls, Thompson, 298

Essex, " 452

Jericho Corners, " 604

Underhill Flat, " 665

Williston, " 402

Franklin, " 430

St. Albans, " 370

Highgate Springs, 160

Swanton, 160

E. Berkshire, 460

Winooski Falls, 208

Sheldon, 375

Richmond, 382

Waterbury, 425

Middlesex, 520

Montpelier, (Capitol,) 540

Northfield, (Depot,) 724

Braintree, 732

West Randolph, 678

Bethel, 556

Royalton, 476

White River Junction, 335

Windsor, 288

Bellows Falls, 225

Woodstock, 400

Brattleborough, 160

Bennington, 432

Manchester, 650

Rutland, 500

Castleton, 475

Ludlow, 985

Proctorsville, 895

Chester, 670

Brandon, 460

Middlebury, 390

Vergennes, 225

Norwich, 400

Newbury, 420

Barnet, 460

St. Johnsbury, 585

Lyndon, 735

Barton, 953

Derby Centre, 975

" Line, 1050

Craftsbury Common, 1158

Troy, south, 740

Irasburgh, 875

Hardwick Hollow, 720

Hydepark, 560

Cambridge, 410

Johnson, 460

Lakes and Ponds.

Champlain, Lake,* 90

Memphremagog " 695

Joe's Pond, Cabot, 1544

Lyford's Pond, Walden, 1692

Molley's Pond, Cabot, 1626

Winooski Pond, Peacham, 1410

Wells River Pond, Groton, 1000

Crystal Pond, Barton, 933

Mud Pond, Sutton, 1183

Savanna Pond, " 1210

Willoughby Lake, Westmore, 1161

Elligo Pond, Craftsbury, 893

Salem Pond, Salem, 967

Pensioners Pond, Charleston, 1140

Island Pond, Brighton, 1182

Lake Connecticut, head of Con. River, 1589

in N. H.,

Falls.

Great Falls, Marshfield, (head,) 1074

" " (foot,) 871

Nat. Bridge Falls, Waterbury, (foot,) 345

McIndoe's Falls, Barnet, (head,) 449

" " " (foot,) 436

20 Miles Rapids, Lunenburg, (head,) 822

" " Barnet, (foot,) 486

Guildhall Fall, Guildhall, (head,) 835

*The level of Lake Champlain is taken for a basis in many of the surveys, which have been made, for canals and railroads, and their profiles indicate the height of places above the lake. In estimating, from these, the heights above the ocean, for the accompanying tables, 90 feet are added. The mean height of the lake above the ocean is frequently stated at 94 or 95 feet, but from the data, to which I have had access, I am disposed to think that 90 feet is nearly the true height. The change of level of the lake, that is, the difference between the extreme high water and the extreme low water marks, amounts to eight feet.

CLIMATE AND METEOROLOGY.

A general account of the Climate and Meteorology of Vermont is given in Part I. page 9 to 28, to which the following tables and observations are now added:

Monthly and Annual Mean Temperatures at Burlington,—continued from the table on page 9, Part I.

MONTHS.	1842.	1843.	1844.	1845.	1846.	1847.	1848.	1849.	1850.	1851.	1852.	Mean, 11 Yrs.
	o	o	o	o	o	o	o	o	o	o	o	o
January,	22.80	28.02	9.91	21.86	19.77	20.97	24.17	15.06	28.74	19.60	14.86	19.98
February,	26.60	12.95	20.38	22.63	15.05	18.59	21.09	14.84	24.32	26.02	23.19	20.46
March,	35.80	25.66	31.00	34.09	33.89	25.78	29.03	31.66	30.47	38.35	28.50	30.83
April,	44.60	43.85	49.50	48.82	47.78	37.48	42.89	39.90	41.35	43.31	39.86	42.12
May,	53.50	53.92	58.50	53.81	57.60	56.40	58.88	51.59	51.64	54.18	56.16	55.10
June,	63.80	61.86	66.50	65.21	64.97	64.15	65.02	66.76	67.12	62.97	64.84	64.80
July,	70.00	64.16	67.10	68.40	69.51	71.08	68.89	72.74	70.03	67.40	71.08	69.08
August,	70.10	67.78	65.60	69.43	70.45	67.62	66.82	69.14	66.03	65.68	66.44	67.73
September,	57.80	59.59	59.90	58.12	64.75	58.80	56.41	58.02	59.69	60.58	59.42	59.32
October,	47.50	42.84	47.00	51.15	45.37	45.89	47.24	47.10	48.25	51.09	47.95	47.40
November,	34.40	31.56	34.10	39.26	41.26	39.84	34.81	43.29	40.38	31.74	35.58	36.39
December,	21.30	26.87	23.40	17.81	23.43	27.00	30.01	23.17	18.65	18.58	30.32	23.69
Annual Temp.	45.60	48.25	44.40	45.42	46.15	48.88	45.39	44.40	45.14	44.54	44.77	44.74

The above results were deduced from three daily observations, made at sunrise, 1 p. m. and 9 in the evening, by the Author. The location is in latitude 44° 29' N. and longitude 73° 11' W., and is one mile eastward from the shore of Lake Champlain, and elevated 256 feet above the lake, or 346 above the ocean.

EXTREMES OF TEMPERATURE.

Greatest and Least Heat in the Shade, and the Hottest and Coldest Day in each year since 1837—15 years.

Year.	Greatest Heat.		Greatest Cold.		Hottest Day.	Mean.	Cold. D. mean.	
		°		°		°		°
1838	June 10 and July 20,	93	January 31.	-18	July 29,	88	Jan. 30,	-6
1839	July 20,	91	January 24,	-19½	August 20,	78	Jan. 28,	-4½
1840	July 16,	94	January 18,	-16	July 16,	81½	Jan. 16,	-7
1841	August 18,	96	January 4,	-10	August 18,	82	Jan. 4,	¾
1842	July 19, Aug. 26,	98	January 13,	-11	July 19, Aug. 26,	79½	Jan. 13,	-4½
1843	June 22,	90	Feb 'ry 17,	-17	June 22,	76	Feb. 17,	0
1844	June 19,	88	January 28,	-24	June 19,	74½	Jan. 29,	13½
1845	July 12,	96	Decemb. 11,	-18	July 21,	80	Dec. 11,	-11½
1846	August 5,	96	Feb. 10 & 19,	-10	August 5,	81½	Jan. 18,	-5
1847	July 19,	98	Feb 'ry 16,	-14	July 19,	88	Jan. 31,	½
1848	July 12, 21, 22: Au. 12,	92	January 11,	-25	June 18,	80	Jan. 10,	-10½
1849	July 12, 18,	100	Feb 'ry 17,	-17	July 18,	87	Feb. 18,	-7.
1850	June 19,	93	February 6,	-18	June 19,	81½	Feb. 5,	-4½
1851	September 10,	92	Feb 8, Dec. 26	-17	September 10,	79½	Feb. 8,	-11½
1852	June 16,	97	January 15,	-17	June 15,	81½	Jan. 20,	-5½

By the above statement it will be seen, that, during the last fifteen years, the range of the Thermometer has been from 100° above to 25° below zero, equal to 125°; and that the warmest day was the 18th of July, 1849, and the coldest day, the 29th of January, 1844, and that the difference between the mean temperature of those two days was 100½°.

TEMPERATURE AT NEWBURY.

FALL OF WATER AT BURLINGTON.

ANNUAL MEAN TEMPERATURE AND WEATHER AT NEWBURY.

Year.	THERMOMETER.				WEATHER.				
	Mean heat.	greatest.	least.	Range.	Fair.	Cloudy.	Rain.	Snow.	Sn. & Rain.
	°	°	°	°	°	°	°	°	°
1840	44.28	90	-83	128	169	196	96	82	6
1841	44.86	86	-22	108	146	219	78	46	4
1842	43.61	86	-19	108	163	202	101	49	7
1843	43.70	90	-25	115	157	208	77	57	5
1844	43.83	86	-26	112	160	206	106	31	2
1845	43.44	88	-28	116	142	223	100	47	5
1846	45.44	90	-20	110	149	216	87	42	4
1847	44.44	90	-22	112	144	221	106	42	6
1848	44.83	87	-32	119	165	201	107	56	6
1849	44.13	94	-21	115	161	204	99	61	2
10 yr.	44.20	94	-33	127	156	209	96	51	5

The materials for the above table are derived from Meteorological observations made at Newbury, by Mr. Johnson, of that place, and published in the Annual Report of the Regents of the University of New York for 1850. These observations were continued through a period of twenty-seven years, but the earlier observations were made without a thermometer, and embraced only the clearness of the sky, the rains and snows, the course of the winds, the progress of vegetation, aurora borealis, and other rare phenomena. The mean temperature in the above table, is derived from three

daily observations, made at 6 A. M., noon, and 6 P. M. This mean is probably a little higher than it would have been if the observations had been made at sunrise, 1 P. M. and 9 P. M., as in the preceding table. By a comparison of the eight years, from 1842 to 1850, which are embraced in both tables, the mean annual temperature of Burlington appears to be about two-thirds of a degree warmer than Newbury, while the latitude of the place of observation in Burlington is 23' greater, and its altitude above the ocean about 75 feet less than the place of observation at Newbury.

MONTHLY AND ANNUAL FALL OF WATER AT BURLINGTON.

Continued from page 12, Part I.

MONTHS.	1842.	1843.	1844.	1845.	1846.	1847.	1848.	1849.	1850.	1851.	1852.	Mean, 11 Yrs.
	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches
January,	1.04	0.71	2.29	2.88	1.72	2.80	1.84	0.79	1.57	1.20	1.03	1.58
February,	8.75	1.43	0.73	2.52	1.47	1.85	0.90	0.41	1.79	1.90	1.69	1.52
March,	1.97	2.12	2.35	2.48	2.20	2.10	2.44	2.14	1.11	0.67	1.92	1.96
April,	2.52	0.82	1.43	2.22	0.91	3.15	1.09	0.47	2.41	1.67	1.15	1.62
May,	1.55	2.47	4.40	3.39	3.18	1.85	4.24	2.74	5.04	2.29	0.71	2.90
June,	8.24	4.58	2.08	2.08	3.63	5.05	2.19	1.41	3.18	7.33	4.76	3.59
July,	4.62	2.59	5.35	4.51	5.08	4.05	3.57	1.78	5.08	3.81	4.99	4.12
August,	1.74	2.09	3.46	2.87	0.48	3.12	4.40	5.69	0.89	1.92	1.50	2.51
September,	3.80	1.80	1.36	5.62	3.77	4.69	2.91	1.33	3.25	2.06	1.80	2.95
October,	4.10	5.03	5.11	2.26	2.65	3.69	2.59	5.32	8.11	3.56	4.11	4.23
November,	2.32	1.63	0.57	4.00	2.88	2.13	2.26	2.69	1.77	3.59	2.90	2.43
December,	3.20	1.48	2.08	2.21	1.68	4.07	2.95	1.63	3.31	1.83	2.26	2.41
	38.85	26.75	31.21	36.04	29.66	38.55	31.38	26.35	37.51	31.83	28.82	31.82

By the above table it appears that the greatest amount of water in any one year was 38.55 inches in 1847, and the least 26.35 in., in 1849,—range 12.20 in. The greatest monthly amount was 8.11 inches, in October, 1850, and the least 0.41 in. in February, 1849—range 7.70 inches. The proportion of the water, which falls in snow,

is about one-fifth of the whole amount. The greatest rain-storms in the eleven years embraced in the above table, were on the 10th of July, 1844, when there fell 4.07 inches in twenty-four hours, and on the 22d and 23d of June, 1851, when the amount was 5.16 inches in thirty-six hours.

FALL OF SNOW.

ADVANCE OF SPRING.

FALL OF SNOW, AND DAYS OF SLEIGHING IN TEN SUCCESSIVE YEARS.
Continued from page 12, Part I.

MONTHS.	1842-43	1843-44	1844-45	1845-46	1846-47	1847-48	1848-49	1849-50	1850-51	1851-52
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
October,	0	10	0	0	7	0	0	0	5	0
November,	9	8	2	0	5	4	3	1	1	24
December,	47	18	13	36	22	13	18	19	48	14
January,	7	16	20	9	24	11	10	16	11	24
February,	20	13	22	24	25	19	10	18	8	17
March,	38	18	12	4	22	20	7	12	14	22
April,	2	0	6	0	7	1	0	8	0	12
Total.	123	78	75	73	112	68	48	74	87	113
Sleighbg.			35 d.	102d.	40 d.	16 d.	30 d.	30 d.	61 d.	37 d.

ADVANCE OF SPRING FOR ELEVEN SUCCESSIVE YEARS.
Continued from page 13, Part I.

Years.	Robins seen.	Bluebirds seen.	Barn Swallows seen.	Currants Blossom.	Red Plums Blossom.	Plums and Cherries Blossom.	Crab Apples Blossom.	Common Apples Blossom.
1842.	March 13	March 13	May 2	May 11	May 14		May 27	May 29
1843.	April 12	April 12	" 3		" 15	May 17		" 26
1844.	March 21	March 25	April 25	April 25	Apr. 30	" 4	" 9	" 11
1845.	" 9	" 13	May 3		" 13			" 21
1846.	" 25	" 26	April 29	" 29	May 5	" 10	" 18	" 17
1847.	" 25	" 25	May 4	May 16	" 20	" 22	" 26	" 28
1848.	" 25	" 28	" 4	" 5	" 11	" 14	" 18	" 20
1849.	" 14	" 26	" 10	" 20	" 23	" 26	June 1	June 4
1850.	" 29	" 28	" 2	" 18	" 19	" 20	" 2	" 4
1851.	" 20	" 22	April 25	" 9	" 14	" 15	May 21	May 24
1852.	" 16	" 17	" 30	" 16	" 18	" 20	" 23	" 27

Of our migratory birds, the Bob-o-link, *Icterus agripennis*, is undoubtedly one of the most regular in its return in the spring. In my account of that Bird, Part I, p. 70, it is said to make its appearance in the lat-

ter part of May. But from observations since made, and from information derived from others, I am satisfied that its arrival in Vermont very seldom varies more than two or three days from the 12th of May.

Closing and Opening of Lake Champlain
and Running of the Line Steamers.—
Continued from page 14, Part I.

YEAR.	Lake Closed.	Lake Opened.	Line boats commen'd running.	Line Boats stop'd.
1842	not clos.		April 13.	Nov. 29.
1843	Feb. 16.	Apr. 22.	April 27.	Nov. 30.
1844	Jan. 25.	Apr. 11.	April 19.	Nov. 29.
1845	Feb. 8.	Mar. 26.	April 9.	Nov. 29.
1846	Feb. 10.	Mar. 26.	April 13.	
1847	Feb. 15.	Apr. 23.	May 3*.	Dec. 2.
1848	Feb. 13.	Feb. 26.	April 8.	Dec. 2.
1849	Feb. 7.	Mar. 23.	April 10.	Dec. 8.
1850	not clos		April 15.	Dec. 9.
1851	Feb. 1.	Mar. 12.	April 7.	Nov. 28.
1852	Jan. 18.	Apr. 19.	May 8.	Dec. 13.

The closing and opening of Lake Champlain have reference to the broadest part of

the lake opposite to Burlington. With the exception of 1835, this part of the lake has never become frozen entirely over earlier than the 15th of January, within the last thirty-six years. The mean time of closing for that period would fall on the 1st day of February. During four of the years it did not close at all. The narrower parts of the lake usually become frozen over so as to interrupt navigation, through its entire length, early in December, and most of the bays become covered with ice about the same time.

* Although the Line Boats commenced running so late as the 3d of May, they were for several days after that unable to proceed farther north than Plattsburgh, on account of the ice. It was not till the 6th that they were able to pass through the whole length of the lake, and then only by cutting through the ice for a distance of nearly six miles. The boats were not able to reach St. Albans till the 10th, and ice remained in many of the bays up to that time.

SHELburne BAY.

The following record, kindly furnished me by my friend Robert White, Esq., of Shelburne, exhibits the number of days, during which teams were able to pass upon the ice from Shelburne Harbor across the mouth of Shelburne Bay and the southeastern part of Burlington Bay, to Burlington, in each year since 1835.

Year.	Days passable.	Year.	Days passable.
In 1836,	76	In 1845,	12
1837,	81	1846,	36
1838,	47	1847,	67
1839,	61	1848,	16*
1840,	21	1849,	40
1841,	48	1850, not passa.	
1842,	24	1851,	46
1843,	56	1852,	82
1844,	67		

Lake Champlain Phenomena.

In Part I, page 14, something was said respecting the sudden disappearance of the ice from Lake Champlain in the spring of some years, and an attempt was made to account for the phenomenon, without having recourse to the absurd notion that the ice sinks. The explanations there given were founded, partly on observed facts, and partly on theoretic views. Additional observations have since been made, which, while they go to confirm the general theoretic principles, require some modifications of the results. It was there supposed that, when the general surface of the lake commenced freezing, the great body of the water below might be at a temperature 7° or 8° above the freezing point, and this, in accordance with the researches of Count Rumford, would doubtless be true were the waters gradually cooled down without agitation. But it is not found to be true in fact; and from recent observations it appears probable that, in consequence of their violent agitation by the cold winds which prevail in the early part of winter, the whole mass of water is cooled down very nearly to the freezing point before any ice is formed at the surface over the deeper parts of the lake, and that, after the waters are protected from the winds by a covering of ice, their temperature is gradually, but slowly, elevated by the reception of heat from the earth beneath. The following experiments show that the temperature of the water under the ice is, generally, some degrees above the freezing point, but not so much above as we had supposed.

On the 27th of March, 1844, when the lake had been covered with ice about eight weeks, at the distance of one-fourth of a

LAKE CHAMPLAIN PHENOMENA.

mile from the shore, the temperature of the water was found to be, at the surface 32°, at the depth of 6 feet 32½°—at 12 feet 34½° and at 25 feet 35½°. On the 8th of March, 1852, when the lake had been frozen over 7 weeks, one-fourth of a mile from the shore, where the water was 28 feet deep, the temperature at the bottom was 34½°, that at the surface being 32°. On the 5th of April following, at the distance of one mile from the shore, the water being 82 feet deep, the temperature at the bottom was 34°. At the distance of 2½ miles from the shore, at an open crack where the water was 125 feet deep, the temperature at the bottom was 34½°.

The sudden disappearance of the ice from Lake Champlain has been a subject of remark and speculation, from the first settlement of the country. But to a person, who carefully observes the circumstances, there will not appear any thing in the phenomenon either mysterious or very wonderful. In order to its occurrence, the temperature of the great body of water must be some degrees above the freezing point, the ice must be reduced to the *honey-comb* structure, or brought into a condition in which it will easily separate into minute divisions, and there must be a wind sufficiently strong to produce considerable agitation of the water.

In addition to theoretic objections to the popular notion that the ice sinks, when it disappears suddenly, persons of observation, who live near the lake, have ocular proof that it does not sink. The ice, while yet spreading over the entire surface of the lake, is seen to be gradually wasting as spring advances and to become less firm, till, at length, it is so far disintegrated that a stick may be thrust through it, while it is yet from 6 to 12 inches thick. This disintegration is sometimes carried so far, before the general icy covering is broken up, that the ice has little more solidity or tenacity than snow saturated with water. In this state of things, a strong wind soon produces rents in the ice,—the waters, before pent up and quiet, are thrown into violent agitation, and the slightly cohering masses are actually seen falling to pieces and dissolving on the surface of the water. But it is never seen sinking, nor was any ever seen lying at the bottom after it had sunk.

Some have supposed that the sudden absorption of so large an amount of caloric, as would be required for the liquefaction of the ice, would produce severe frost in the neighborhood of the lake, which is not found to be true in fact. But this difficulty is removed by the consideration, that the heat employed in melting the ice, is derived

* The mouth of Shelburne Bay only.

rather from the water than from the atmosphere, and that the surface of the lake, in contact with the atmosphere, after the ice is all melted, is still warmer than the icy covering was before.

There is another phenomenon connected with the freezing of Lake Champlain, which is of some interest. At Rouse's Point, where the lake passes into Canada, and where it narrows down into the form of a river and some current is perceptible, it becomes strongly frozen over long before the broad lake closes; but very soon after the broader and deeper parts of the lake become covered with ice, the ice begins to fail at this place and in a measure disappears, even while the cold is severe and ice is forming in other places. To many, this phenomenon has appeared somewhat mysterious; but its explanation may, probably, be found in the circumstance that the lake at Rouse's Point is quite narrow and shallow and that the water which passes there, before the broad lake freezes, is the surface water and consequently the coldest water of the lake. This cold water, passing the Point in a shallow, scarcely perceptible stream, is soon cooled down and congealed at the surface, and the ice usually becomes strong here before the main body of the lake is frozen over. But soon after the broad lake closes over, the ice begins to waste at the Point and usually fails here soon after it becomes good elsewhere. This failure of the ice here, is owing to the circumstance that, after the lake is covered with ice, the water passing off here is no longer the cold surface water, but the warmer water lying below. It is this warmer water by its motion, though moderate, under the ice and in contact with it, which causes the ice to fail here, while it is increasing in other places.

In February, 1851, there was an occurrence in Windmill Bay, on the west side of Alburgh, which is worthy of note; the lake and bay being at that time covered with ice. On Saturday, Feb. 15, the wind blew quite hard from the south, and the snow thawed so that water ran in the roads. Saturday evening the wind came suddenly round to the west and blew for a short time with great violence. In the morning of the 16th something unusual was observed in the bay, and on going to it, it was found that the ice had been ruptured for the space of five or six rods each way, and that there were two immense blocks of ice lying upon the firm ice at some distance from the opening made by the rupture. The largest of these blocks was $39\frac{1}{2}$ feet long, with an average width of about 26 feet. The other was thirty-eight feet long and 20 wide, and their thickness was 17 inches.

The nearest of these blocks was $7\frac{1}{2}$ rods from the opening and they were both the same side up as when they were lying upon the water. The depth of the water at the opening was 17 feet, and the sides of the blocks matched, in part, the margin of the opening.

Respecting the cause and manner of this occurrence, there were various conjectures; many supposing that it must have been effected by the exertion of some sudden force or explosion from beneath. But as a fall from the least elevation must have inevitably broken such masses of ice into innumerable fragments, it is evident that it was not thrown out by a force acting upward, but by a lateral force, which caused the masses to slide upon the surface of the undisturbed ice, and to be thus removed from their bed without being broken. The cause of this lateral pressure was probably the wind. While the wind was blowing from the south, a crack might have been opened and these large fragments loosened. When the wind came round and blew violently from the west, this crack might have closed suddenly and the broken pieces, not returning exactly to their former position, might have been thrown out with a force sufficient to cause them to slide to the position in which they were found, without being broken.

QUADRUPEDS OF VERMONT.

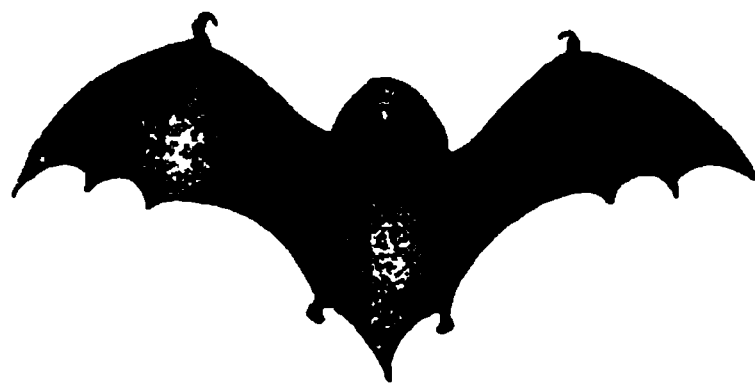
Additional to Part I, Chapter II.

To our previous list of Mammalia, we now add two living species, and two extinct fossil species. They are the following:

Ves. noveboracensis, N. Y. Bat.
Mus leucopus, White bellied Mouse.
Eleph. primogenius? Fossil Elephant.
Beluga vermontana, Fossil Whale.

Besides these, we have made additions to our account, of the following:

Felis concolor, Panther.
Phoca vetulina, Seal.
Sciurus hudsonius, Red Squirrel.



NEW YORK BAT.

Vespertilio noveboracensis.—LINN.

DESCRIPTION.—Head small; nose point-

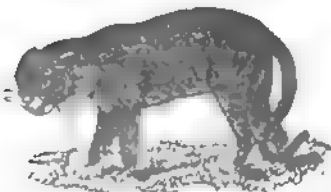
PANTHER.

HISTORY.

ed. Ears broad, rather small; turgid club-shaped. Interfemoral membrane broader than long, including the entire tail. This membrane is hairy above, but two-thirds naked beneath. Hind feet with five sub-equal toes, of which the outer are shortest. Brachial membrane naked above, excepting near the body and at the base of the phalanges: beneath, the hair extends farther from the body, and the patch at the base of the phalanges much more extensive. General color of the fur above, tawny red—beneath, the same, but much lighter. A whitish patch on the sides of the body at the base of the wings, most conspicuous on the under side. The brachial membrane is dark brown, beautifully reticulated with lighter color. Length of the specimen before me $4\frac{1}{2}$ inches, spread of the wings 12 inches.

HISTORY.—This Bat is less common in Vermont than several other species, and Vermont is probably near the limit of its northern range. According to Dr. DeKay, this is the most common species in the state of New York. Its range is from Massachusetts to the Rocky Mountains, and south through Pennsylvania. This Bat, from its red or ferruginous color, is very commonly called the *Red Bat*, and is figured under that name in Wilson's Ornithology. With the exception of the Hoary Bat, this is the largest bat found in Vermont, and in its measurements it scarcely falls short of the Hoary Bat, but its form is more slender.

For the specimen from which the preceding description is made, I am indebted to my friend C. S. Paine, of Randolph.



PANTHER, or CATAMOUNT, (Part I.—37.)

Felis concolor.—LINNÆUS.

DESCRIPTION.—Color of the face, head and all the upper parts of the body dark gray, slightly brushed with red. Interior of the ears, under side of the body and tail, and inner side of the legs grayish ash; between the hind legs and beneath the tail tawny white. Exterior of the ears, bottoms of the feet and extremity of the tail black. Also a black patch on each side of the nose, from which the whiskers proceed, and the two connected together by a brownish band over the nose. Chin, lower lip and part of

the upper lip clear white. Nose naked, of a brownish copper color, and narrowly margined with white hairs. Whiskers $2\frac{1}{2}$ inches long, white, intermingled with a few black hairs. Eyes oblique, with a whitish spot above and a little in front of each, and a smaller one below. Irides orange. Claws completely retractile, one inch long, very strong and sharp, of a pearly white color, having a blood red tinge on the under side near the base.

Dental Formula.—Incisors $\frac{2}{1}$ canines $\frac{1}{1}$, molars $\frac{4}{2}$ = 80. Teeth all clear white, perfectly sound, exhibiting no marks of wear. Incisors small, outer ones largest. Canines conical and strong, projecting 1.1 inch beyond the gum. The carniverous molars project $\frac{3}{4}$ this of an inch. Posterior molars in the upper jaw not fully developed. The weight of the specimen before me, which is a male, is 86 pounds.

Length, from the nose to the root of the tail, 48 inches. Length of the tail (vertebrae) 29.5, skin and hair beyond 1.5) 31. Total length 79 in., or 6 ft. 7 in. Length of facial line, from nose to occiput, 10. Width of the head between the ears, posteriorly, 4.5, anteriorly 6, between the eyes 2.5. Height of the rounded ear 3.5. Length of the humerus 8, fore-arm 9, thigh 11, leg 12. Circumference of the wrist 7.5, fore paw 7.5, ankle 6, hind foot 7. Height at the shoulders 26, at the rump 27. Girth of the neck 16 inches, just behind the fore legs 27 inches.

HISTORY.—The Panther here described, was caught on the western slope of the Green Mountains, in the town of Manchester, Bennington county, on the 5th day of February, 1850. It was taken, by a Mr. Burritt, in a trap set for a bear. Being caught by one of its paws only, and being quite ferocious, it was not deemed prudent to attempt to secure him alive, and he was killed by shooting him through the body. It was purchased by the Hon. L. Sargeant and a few others in Manchester, who, with a public spirit and zeal for the advancement of science truly commendable and worthy of imitation, presented it to the Museum of the University of Vermont, where its skin and skeleton are now preserved. In taking off the skin, the head, neck and inner sides of the fore legs were found very much filled with Hedge-Hog quills, which, in many cases, had passed entirely through the skin and were deeply embedded in the flesh. The trap, in which it was caught, had not been visited for some time previous, and, from appearances, it was supposed to have been several days in the trap, when found; and when shot it bled very profusely. Its weight was very much

SEAL.

diminished by both these circumstances, and it was the general opinion, that, when first caught, its weight was not less than 100 pounds.

The teeth of this Panther were all perfectly sound and white, showing no marks of wear, and as the posterior molars in the upper jaw were not fully developed, there can be no doubt that it was a young animal, probably about two years old.

The Panther, above described, is the last and the only one which has been, to my knowledge, killed in Vermont for many years; and as the animal is now exceedingly scarce, and there may never be another obtained, within the state, for any of our museums, I have thought it advisable to be thus minute in its description and history, notwithstanding the full general account given in Part I—p. 37.

SEAL.

Phoca vitulina.—LINNÆUS.

In Part I, page 38, of my History of Vermont, will be found some account of a Seal captured on the ice on Lake Champlain in 1810. Another Seal was killed upon the ice between Burlington and Port Kent, on the 28^d of February, 1846. Mr. Tabor, of Keeseville, and Messrs. Morse and Field, of Peru, were crossing over in sleighs, when they discovered it crawling upon the ice, and, attacking it with the butt end of their whips, they succeeded in killing it, and brought it on shore at Burlington, where it was purchased by Morton Cole, Esq., and presented to the University of Vermont, where its skin and skeleton are now preserved. Before it was skinned I noted down the following particulars:

Total length of the Seal 50 inches; thickness just behind the fore legs 12 inches; weight 70 pounds. Length of the fore paw 7, nails 1½, width 4; hind paw, length 8, nail 1, width 11, measured along the margin of the web, with the foot spread. Tail 3.5 inches long and 2 broad at the base; hair on the tail reversed, forming a crown at the extremity. Nose truncated and somewhat notched, being 2.5 inches across the extremity. Whiskers numerous, and nearly white; four erect, stiff and nearly white bristles, situated above and a little behind each eye. Distance between the eyes 2½ inches.

The specimen was a female, having two abdominal mammae situated thus (••^{navei}••^{teats}). The teats appeared rather like cavities than protuberances, and she was doubtless a female which had never suckled young.

Dental Formula—Incisors $\frac{6}{4}$ canines $\frac{1-1}{1-1}$, molars $\frac{5-5}{5-5}$ = 34.

WHITE BELLIED JUMPING MOUSE.

Lower incisors quite small. Upper incisors larger, (the two outward ones largest,) overlapping the lower ones, when the mouth is shut. Canines rather large and hooking inward. The molars are placed obliquely in the jaw; that nearest the canines smallest, and increasing backward in size and in the number of their sharp pointed tubercles. Its dentition resembles very closely that of the common cat.

Its hair was short, stiff, thick and even. Color of the hair brown olive and tawny white, forming a beautiful dark spotted marbling, lighter and more tawny on the belly. Base of all the hairs on the hind feet brown olive, with the tips slightly brushed with white, giving them a hoary appearance. Hair on the fore feet obscurely mottled.

At the time the above mentioned seal was taken, the lake, with the exception of a few cracks, was entirely covered with ice.

WHITE BELLIED JUMPING MOUSE.

Mus leucopus.—RICHARDSON.

DESCRIPTION.—Head moderately large, with the nose pointed. Eyes medium size. Ears large, rounded above, and naked, with the exception of a short down, which is whitish, along the margin. Auditory opening rather large. Whiskers turned backward, in part, longer than the head, some of the hairs black and some white. Fore feet with four claws and a rudimentary thumb, without nail. Hind feet with five toes, having feeble curved claws, nearly concealed by long white hairs. Tail slender, and slightly tapering. Incisors yellow. Fur fine, and rather long. Color above reddish brown, darkest along the back. The reddish brown extends downward on the shoulders and on the outside of the thighs, forming a band. All the under parts, from the chin to the extremity of the tail, including the feet and nails, pure white, excepting a narrow band of reddish brown under the base of the tail. Color of the fur, plumbeous, at its base. Length of the specimen before me, which is a male, measuring from the snout to the extremity of the tail, 7 inches; head 1, body 2.7, tail 3.3, fore feet, 0.45, hind feet, 0.8, whiskers 1.5.

HISTORY.—This Mouse is a very delicate and beautiful little animal. It is exceedingly active, often leaping to considerable distances in the manner of the Deer-Mouse, but it has nothing of that Kangaroo form, or disproportion between the fore and hind legs, which exists in that species. It is most common in forests and wooded places, but frequents, also, meadows and cultivated fields, particularly where grain and grass-

WHITE SQUIRREL.

seed abound. It also enters barns and houses in quest of food and shelter. Two or three have been taken in a trap, in my own cellar, during the past year, and they are frequently brought in by cats, in the village of Burlington. It is found on both sides of the Green Mountains. I lately received two specimens from my friend, C. S. Paine, which were taken in Randolph. It is found in all the northern states, and as far north as Hudson's Bay.

WHITE SQUIRREL.

Sciurus hudsonius, (Albino).—P. L., p. 46.

November 11, 1850, I obtained an individual of the species commonly called the *Red Squirrel*, or *Chickaree*, which was entirely white. It was shot, in the top of

a large tree, near the railroad bridge, between Burlington and Colchester. There were two of these white squirrels in company, but only one of them was captured. This one was a male, and, although its form was slender and delicate, it had every appearance of having been healthy and active. Its entire length, from the nose to the extremity of the hairs of the tail, 12.5 inches—to the extremity of the vertebrae of the tail, 11, to the root of the tail, 6; length of the head 2. Color of the hair entirely of snowy whiteness. Nails white, with a slight carnation tinge. Eyes nearly transparent, with a slightly smoky aspect, but in the dead animal, they exhibited scarcely any of that redness, which is regarded as the characteristic of *albino*s.

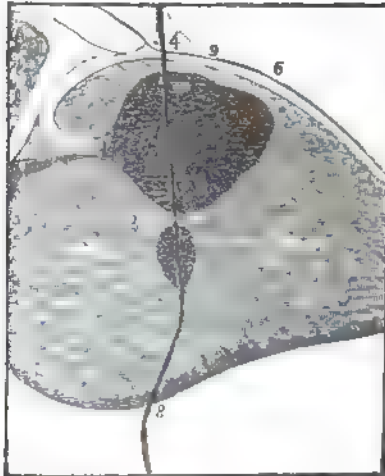
FOSSIL ELEPHANT.

Elephas primigenius?—BLUMENBACH.

It is a remarkable fact that, in making the Rutland and Burlington Rail Road, which extends from Burlington to Bellows Falls, two of the most interesting fossils ever found in New England, were brought to light. These were the remains of an Elephant and a Whale: the former were found in Mount Holly, in 1848, and the latter in Charlotte, in 1849.

The Rutland and Burlington Railroad crosses the ridge of the Green Mountains, in the township of Mount Holly, at an elevation of 1415 feet above the level of the ocean, and the bones of the fossil Elephant were found at that height. In order that their true position may be understood, and a knowledge of it preserved, the accompanying rude map has been prepared. The map embraces an area of about 85 acres, lying at the summit level of the Green Mountains, over which the railroad passes.

More than half of this area consists of a solid mass of rock, elevated considerably above the ground on each side, and only slightly covered with soil, or earth, excepting the cavities indicated, which are filled with vegetable muck. The line on the map, marked 5, denotes the ridge, which, previous to making the railroad, divided the waters flowing into Connecticut river from those falling into Lake Champlain. The cut, for the railroad, through this mass of rock, (from 4 to 8 on the map,) is about 180 rods in length, and from 12 to 85 feet deep. The muck beds are formed in basins excavated out of the rock. The larger basin appears to have been originally filled with water, and to have been a favorite resort for beaver, a large proportion of the materials which formed the lower part of the



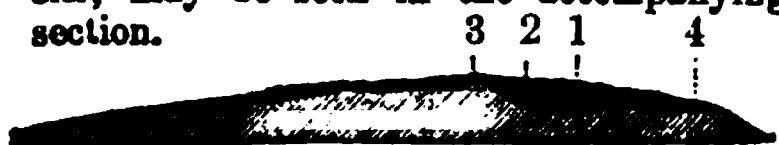
muck, consisting of billets of wood, about 18 inches long, which had been cut off at both ends, drawn into the water and divested of the bark, by the beavers, for food. When first taken out, the marks of teeth upon the wood were as distinct as if they were the work of yesterday. At 3, the outlet of the basin, the beavers had constructed a regular dam for the purpose of deepening the waters within. But at the time the excavation for the railroad was made, the basin had become entirely filled with vegetable matter, which was in parts 15 feet deep, and its surface was a swamp, on which plants, shrubs, and small trees were growing. The billets of wood, which the beavers had brought in, were, many of them, three inches in diameter, and were of several kinds, as ash, willow, and alder.

FOSSIL ELEPHANT.

These, together with numerous cones of black spruce and white pine, in a good state of preservation, were embedded in a thick vegetable mucilage, nearly resembling clay in color, but which, when cut in cakes and taken in the hand, would shake and tremble like a mass of jelly. A cake of this mucilage, when dried, was much lighter than cork, and was diminished to about one-eighth of its original bulk. The mucilage was undoubtedly produced by the solution of leaves and wood, which had steeped for ages in that basin of cold water, from which there was not a sufficient flow to carry it off. The billets of wood, when taken out from the bottom of the muck, appeared plump and fresh, as if they had been recently peeled, but were very soft, and in drying, they lost full five-sixths of their bulk.

In making the excavation for the railroad, through the muck-bed above described, in the latter part of the summer of 1848, the workmen found, at the bottom of the bed, resting upon gravel, which separated it from the rock below, a huge tooth, the place of which is indicated on the map and Cut by 1. The depth of the muck at that place was 11 feet. Soon afterwards, one of the tusks was found, at 2, about 80 feet from the place of the tooth, above mentioned, which was a grinder. Subsequently the other tusk, and several of the bones of the animal were found near the same place. These bones and teeth were submitted to the inspection of Prof. Agassiz, of Cambridge University, who pronounced them to be the remains of an extinct species of Elephant. The Directors of the Rutland and Burlington Rail Road, to whom they belong, design to have them placed in the Museum of the University of Vermont, for preservation, and for the illustration of our fossil geology.

The form of the cut through the rocks and the muck, and the position of the fossils, may be seen in the accompanying section.



1. Grinder.
2. Tusks.

3. Original dividing ridge.
4. Present division of water.

The grinder is in an excellent state of preservation, and weighed 8 pounds, and the length of its grinding surface is about 8 inches. The tusks are somewhat decayed, and one of them badly broken. The chord, drawn in a straight line from the base to the point, of the most perfect tusk, measures 60 inches, and the longest perpendicular, let fall from that to the inner curve, of the tusk, measures 19 inches. The length of the tusk, measured along the curve on the outer surface, is 80 inches,

and its greatest circumference, 12 inches. The circumference has diminished very much since the tusk was taken from the muck bed, on account of shrinkage in drying, and several longitudinal cracks have been formed in it, extending through its whole length, and it was found necessary to wind it with wire to prevent it from splitting to pieces.

These are believed to be the only fossil remains ever found in New England, which have been, with certainty, ascertained to belong to an Elephant. Remains of Elephants have been found in several of the southern and western states, and very recently some fine specimens have been dug up in Ohio.

I have prefixed to this account the specific name of the Mammoth, or fossil Elephant of Europe, but have little doubt that ours is a distinct species, and I am happy in knowing that one of our best comparative anatomists is now investigating this very subject.

FOSSIL WHALE.

Beluga vermontana.—THOMPSON.

As many rare fossils are rendered nearly valueless by the want of an accurate knowledge of their localities, and of the circumstances in which they were found, I have deemed the above mentioned fossil, which is undoubtedly the most interesting of the organic remains yet found in Vermont, of sufficient importance to justify a minute history of its discovery and position, and the introduction of a small map of the locality. The discovery of this fossil took place in August, 1849. While widening an excavation for the Rutland and Burlington Rail Way, in the township of Charlotte, the workmen struck upon a quantity of bones, which were embedded in the clay at the depth of about eight feet below the natural surface of the ground. Some of the Irishmen remarked that they were the bones of a dead horse buried there; but little notice, however, was taken of them, till the overseers observed something peculiar in the form of several of the bones, and were, thereby, induced to examine them more carefully. It was soon found that the bones discovered, belonged to the anterior portion of the skeleton of some unknown animal, the head of which had already been broken into fragments, by the workmen, and many of the fragments carried away with the earth, which had been removed. On carefully removing more of the clay, a number of vertebrae were found, extending in a line obliquely into the bank, and, apparently arranged in the order in which they existed in the living animal. These

FOSSIL WHALE.

BONES DESCRIBED.

vertebræ were taken out, and, together with the sternum, fragments of the head, ribs, &c., were forwarded to Burlington, and, by the kindness of Messrs. Jackson & Boardman, engineers on the railroad, were placed in my hands.

By a careful examination of these bones, I found that they belonged to some animal, with whose skeleton I was not acquainted, and that there were wanting, in order to complete the skeleton, the greater part of the head, all of the teeth, a considerable number of vertebræ and ribs, and the bones of the limbs. I was at first in some doubt, whether the animal belonged to the whale family or to the saurian; but this doubt was soon removed, by a careful examination of the caudal vertebræ. These were found to have their articulating surfaces convex, and rounded in such a manner as to allow of a very extensive vertical motion of the tail, but of a very limited lateral motion. This arrangement plainly indicated that the movements of the animal in the water, were effected by means of a horizontal caudal fin, and that it, therefore, belonged to the family of *Cetacea*, or Whales.

The manner in which these caudal vertebræ move upon each other may be seen in the cut, where Fig. 1 represents the 13th, 14th and 15th vertebræ of the tail,—*a*, as they appear viewed from above—*b*, as seen laterally*.

After having carefully removed from the bones, I had received, the adhesive clay, in order to prevent their crumbling by exposure to the air, and secure their preservation, I saturated them with a thin solution of animal glue, and then proceeded to Charlotte in order to recover, if possible, the bones, which were missing. By spending several days in the search, I succeeded in obtaining most of the anterior portion of the head, nine of the teeth, and thirteen additional vertebræ, together with the bones of one forearm, several chevron bones, and portions of ribs. From the portions of the head, which I obtained, and the fragments previously received, I was able to reconstruct so much of the upper and anterior portion of the head, as to exhibit distinctly its *spiracles*, or blow-holes, showing unequivocally that it belonged to the Whale family. My next object was to ascertain, if possible, whether it was a living, or an extinct, species of this family. Being without specimens for comparison, my only reliance for aid was Cuvier's great work on Fossil Bones. By a comparison of the Fossil Whale with the descriptions and

figures in that work, it was found to resemble the living rather than the extinct types, and that the osteology of the head was very like that of the *Beluga leucas*, or small northern White Whale.*

Having collected together all the bones and fragments of the Fossil, within my reach, I proceeded with them to Cambridge, Mass., and submitted them to the inspection of Prof. Agassiz, who confirmed the opinion I had formed respecting them, and, for two days, very kindly lent me his aid, and his great skill and knowledge of the subject, in their collocation and arrangement. Having, all together, more than four-fifths of the bones of the skeleton, he was able, from the number, position and size of these, to determine the number, position and size of those, which were missing, and thus to determine the size and form of the whole animal.

The head of the skeleton, as already remarked, was broken into a great number of pieces, and only a portion of the fragments recovered; but enough to determine its entire length and general form. Fig. 2 represents the head, as reconstructed out of the fragments, viewed from above; and fig. 3, a side view, with the lower jaw dropped a little below its true place. The entire length of the head is 21.2 inches. The maxillary bone on the left side is mostly wanting, but on the right side, it is entire, so far as to embrace the alveolar margin, which is 6.85 inches in length, and perforated for 8 teeth. The corresponding alveolar margin of the lower jaw measures 5.5 inches, and is perforated for 7 teeth. Hence it appears that there were 16 teeth in the upper jaw and 14 in the lower, making 30 in the whole.

The teeth are all of one kind, being conical, with flat or rounded crowns, much worn, but, in their substance, very dense and firm. They are from one to two inches in length, with a diameter of half an inch. Fig. 4 represents their different forms and sizes. Only nine of the teeth were recovered, and none of those were in their places when found; but, that they were in their places, up to the time the bones were first discovered, is evident, from the fact, that, while every other cavity in the bones was filled with clay, the alveoli were all empty.

Of the vertebræ, 41 were secured, of which four were cervical, eleven dorsal, ten lumbar, and sixteen caudal. Three cervical vertebræ, the first, fifth and sixth, are evidently missing, which, with the four obtained, make seven, the usual number. These vertebræ are all free, not being soldered together, as in the common dolphin,

* The fractions after the number of the figure, when introduced in the accompanying cuts, denote the linear proportion of the cut to the object, which it represents.

* Cuvier's Osse. Foss., Vol. V, page 299 and Plate XXII, fig. 5 and 6,—Paris edition, 1825.



FOSSIL WHALE.

LOCALITY.

and some other cetacians. Fig. 5 represents the third cervical vertebra.

The second and twelfth dorsal vertebrae are missing, the whole number being thirteen. Fig. 6, represents the seventh dorsal vertebra—*a*, as seen from behind—*b*, as seen laterally.

The lumbar vertebrae amount to twelve, of which the sixth and twelfth are missing. Fig. 7, represents the seventh lumbar vertebra. These vertebrae all have the same general form, but the lateral winged processes are more decayed and broken in some of them, than in the one here represented.

The eleventh and seventeenth caudal vertebrae are missing, and perhaps a nineteenth and twentieth, making the, probable, whole number, twenty. Fig. 8, represents the fourth caudal vertebra. The form of those nearer the extremity of the tail may be seen in fig. 1.

From these statements, it will be seen, that the whole number of vertebrae in the skeleton was 52, eleven of which are missing. Two of the missing vertebrae were known to have been taken away, after the bones were discovered. Articulating surfaces, at the meeting of the caudal vertebrae, indicate five chevron bones, of which the fourth only is wanting. Fig. 9, represents the second chevron bone.

The total length of the vertebral column, due allowance being made for the eleven missing vertebrae, and 17 inches for the aggregate thickness of the 51 intervertebral cartilages, is one hundred and thirty-seven inches. Of this length, the cervical vertebrae make 10 inches, the dorsal 40, the lumbar 48, and the caudal 89. The lumbar vertebrae are largest, having an average length of about 4 inches, with a diameter of 3 inches. The total length of the animal, including the head and caudal fin, must have been about 168 inches, or 14 feet.

Fig. 10, is the *hyoid* bone, and Fig 11, the *sternum*, both of which are large and strong, in proportion to the size of the skeleton. The former measures 8.5 inches in a right line, from point to point, and the latter is 15 inches long, from $3\frac{1}{2}$ to 7 wide, and on an average about one inch thick.

The ribs are considerably decayed and broken. The longest entire rib measures just 24 inches along the curve. Fig. 12, represents the anterior rib, on one side. It is very strong, consisting of two portions, of nearly equal length, of solid bone.

Fig. 13, represents the scapula, the humerus and the bones of the fore-arm of the left fin, in their connexion. The scapula and the ulna of the right side were recovered, but all the other bones of the paddles are wanting. The height of the

scapula is 7 inches; the length of the humerus 5, and of the fore-arm 4 inches.

I was able to obtain the following measurements of the head, which admit of direct comparison with a part of the measurements, given by Cuvier, of the head of *Beluga leucas*:


	<i>B. vermontana.</i>	<i>B. leucas.</i>
Length of the head, from the occipital condyles to the end of the snout,	21.2 inch.	20.9 inch.
" of one side of the lower jaw,	16.5 "	16.5 "
" of alveolar margin,	8.2 "	7.8 "
" of the symphysis,	3.1 "	3.1 "

Between these measurements, it will be seen that there is a very close agreement; but they disagree in their dental formulæ, as expressed below:

<i>B. vermontana.</i>	<i>B. leucas.</i>
Dental Formulæ, $\frac{8}{7} \frac{8}{7} = 30$:	$\frac{9}{5} \frac{9}{5} = 36$.

They also differ in the relative width of the maxillary and intermaxillary bones, as developed on the upper side of the snout, and also in the outlines of the head.

Since the above measurements and comparisons were made, I have had an opportunity to examine the bones of three heads of *B. leucas*, in the Hunterian Museum, in London, and an entire skeleton of the animal in the collection of Prof. Agassiz, at Cambridge, Mass. On account of the absence of Prof. Agassiz, when I visited Cambridge, a minute comparison of my fossil bones, with the corresponding bones of his skeleton, was not gone into, but a sufficient number of bones was compared, to leave little doubt that they belong to different species of the same genus. I have, therefore, described my *Beluga* under the specific name of *vermontana*, which I gave it, provisionally, in my first account of the fossil*.

LOCALITY.—In order to prevent any doubt, hereafter, in regard to the precise place in which these fossil bones were found, I have here introduced a little map of the township of Charlotte, on which I have marked the locality by a black . The township is six miles square, and bounded on the west by Lake Champlain. The single lines denote the principal roads passing through the township. The railroad passes through it, from north to south, nearly parallel to the lake shore, and at an average distance of $1\frac{1}{2}$ mile from it. The distance between the two roads, which cross the railroad, one on the north and the other on the south side of the locality, is about 80 rods; the distance to the locality, from the north road, being perhaps 25 rods, and from the south road, 55 rods. The northern road crosses the railway on a bridge, over the excavation, elevated about 16 feet above

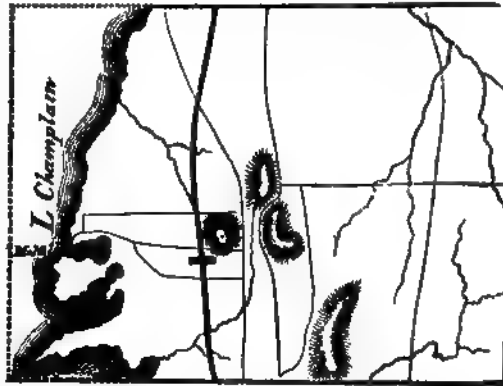
* Silliman's Journal of Science, Vol. IX, p. 256.

MAP OF CHARLOTTE.

FOSSIL WHALE.

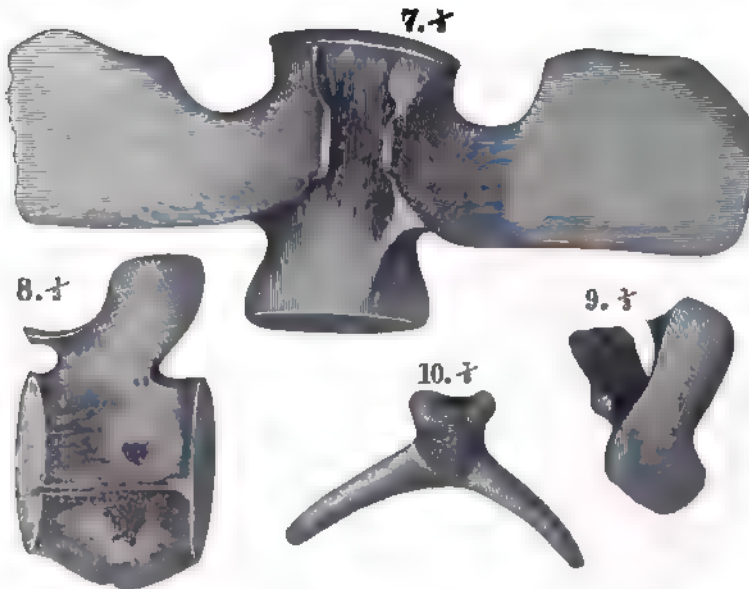
the track: the southern road crosses on a level with the track. The accompanying cut exhibits a section along the east side of the excavation, in which the bones were found. The surface of the ground slopes to the south, and, to the depth of four feet, consists principally of sand, showing no signs of stratification. Next, below this, is a mixture of sand and clay, finely and regularly stratified, for a depth of 2½ feet, below which is a vast bed of fine blue clay, in which were observed no signs of stratification, and which appears to have been, previous to the deposit of the stratified sand and clay above it, an extensive quagmire.

MAP OF CHARLOTTE.



SECTION.

A and C denote the points where the two roads, above mentioned, cross the railroad; A the northern road, and C the southern, and the line A C the distance between the roads. From C to B, the railroad track is on the level of the natural surface of the earth; and from B to A at the bottom of the excavation in the clay bed. D indicates the point in the line of the road, where the fossil bones were found.



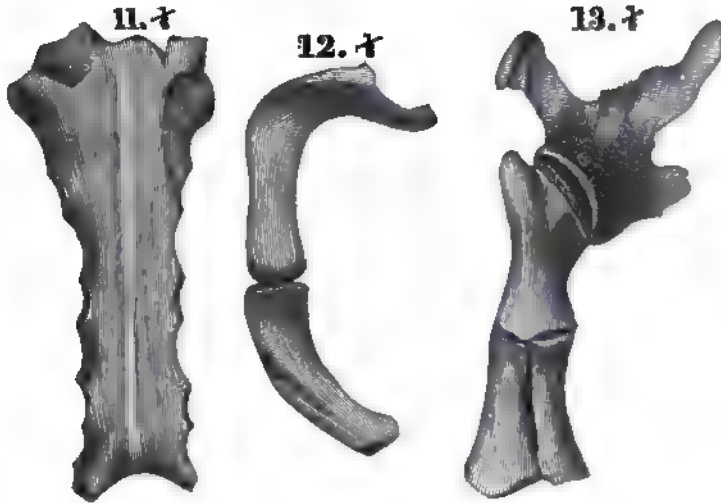
The fossil bones were embedded in this clay, at an average depth below its surface of nearly two feet. The head of the skeleton was towards the northwest, was lowest, and was nearly on a level with the railway, while the posterior parts extended obliquely into the bank, towards the southeast. In the blue clay, with the bones, were found

FOSSIL WHALE.

BIRDS OF VERMONT.

some vegetable remains, and also specimens of *Nucula* and *Saxicava*. At the surface of the blue clay were great numbers of *Mytilus edulis* and *Sanguinolaria fusca*, and the latter were scattered through the

stratified sand and clay above. The locality, as ascertained by the railroad survey, is 60 feet above the mean level of Lake Champlain, and 150 above the ocean.*



BIRDS OF VERMONT.

Additional to Part I, Chapter III.

To our list of Birds given in Part I, page 58, we now add the following species:

<i>Tyrannus cooperi</i> ,	Olive sided King Bird.
<i>Muscicapa trochilii</i> ,	Trall's Flycatcher.
" <i>rusticilla</i> ,	American Redstart.
" <i>pusilla</i> ,	Green Blackcap Warbler.
<i>Vireo gilvus</i> ,	Warbling Vireo.
<i>Merula olivacea</i> ,	Olivebacked Thrush.
<i>Sylvia striata</i> ,	Black-poll Warbler.
" <i>rufo-capilla</i> ,	Red-poll Warbler.
" <i>pardalina</i> ,	Canada Warbler.
" <i>parus</i> ,	Hemlock Warbler.
" <i>philadelphia</i> ,	Mourning Warbler.
" <i>americana</i> ,	Paricolored Warbler.
<i>Frinsilla borealis</i> ,	Mealy Redpoll.
<i>Coccothorus ludovicianus</i> ,	Rosebreasted Grosbeak.
<i>Tanagra rubra</i> ,	Scarlet Tanager.
<i>Picus pileatus</i> ,	Crested Woodpecker.
<i>Ardea minor</i> ,	American Bittern.
<i>Totanus melanoleucus</i> ,	Greater Yellow Shanks.
<i>Tringa semipalmata</i> ,	Semipalmated Sandpiper.
<i>Colymbus septentrionalis</i> ,	Red Throated Loon.

We also make additions to our former account, of the following:

<i>Falco chrysaetus</i> ,	Golden Eagle.
<i>Cypselus pelagicus</i> ,	Chimney Swallow.
<i>Columba migratoria</i> ,	Passenger Pigeon.

THE GOLDEN EAGLE.

Falco chrysaetus.—LINN.

In May, 1845, two eagles of this species were observed flying near the summit of a high hill, in Pittsfield, in this State. One

of these was shot and wounded. It flew about half a mile and pitched down into a thick forest, but could not then be found. About a week afterwards, it was discovered and captured. It was confined in a stable, fed on meat, and kept there more than a year. It was then sent to Middlebury, to Prof. C. B. Adams, who, on the 28d of Oct., 1846, sent it to me, at Burlington. I kept it in an open cage, or coop, in the corner of my yard, through the winter, and watched its conduct with much care. It was a female, and was, in her disposition, very savage; and during the 7 or 8 months I kept her alive, I made very little progress towards taming her. She would strike

* In 1847, a portion of the skeleton of a whale, was found in the same kind of clay, as that in which the bones were found in Charlotte, in the vicinity of Montreal. It was found about 15 feet below the surface, in digging clay for making bricks, and was about 100 feet above the level of the St. Lawrence. The portion found, consisted of 19 consecutive vertebrae, which measured, all together, when arranged in their order, 4 1-2 feet. About one-third of the vertebrae were caudal, the other two-thirds sacral and lumbar. These fossil bones were carried to London, by Mr. Logan, Provincial Geologist, where I had an opportunity of comparing with them some of the vertebrae of *B. vermontana*, at the Museum of the Geological Survey of Great Britain, and I have little doubt that they are identical in species.

OLIVE-SIDED KING BIRD.

TRAILL'S FLY-CATCHER.

AMERICAN REDSTART.

with her feet with the quickness of a cat ; and, after having had a piece of meat snatched from my hand so suddenly that I scarcely had a glimpse of the claws that took it, I thought it most prudent to keep my hands beyond her reach. She was most fond of meat when first killed, but, if hungry, she would not reject it after it had become putrid. When a hen, or dove, was killed and thrown into her cage, she would suddenly pounce upon it, striking in her claws with great force. She would then stretch up her neck and look around, as if exulting over the victory she had achieved. Before eating a particle of the fowl, she would take it to her roost, and holding it with one foot, she would pick it, with her beak, as cleanly as if it were to be cooked.

The length of this specimen was 38 inches, the spread of her wings 72, the folded wing 24, tarsus 8.5, tibia, 6.5, tail, consisting of 12 feathers, 10.5. It weighed, when killed, on the 19th of May, 1847, 10.5 pounds, the greater part of the weight being made up of the muscles of the wings and legs.

NOTE.—The specimen, belonging to the Museum of the University of Vermont, which I have described in Part I, page 60, without a name, I have satisfied myself to be an old female Bald Eagle.

THE OLIVE-SIDED KING-BIRD.

Tyrannus cooperi.—NUTTALL.

DESCRIPTION.—General color above, dark olive, becoming dusky brown on the head, wings and tail. Chin, throat, belly, and under tail coverts, white, tinged with light greenish yellow. Secondaries edged with white, and the wing coverts tipped with gray, giving the appearance of two obscure bars on the wings. Breast and sides of the belly, brownish, with an irregular yellowish white band from the throat down the breast to the belly. Legs and feet black. Upper mandible, blackish horn color ; lower, yellowish, darker at the point. Irides hazel. Bill stout and broad. Second quill longest, first and third equal. Tail emarginate, extends one inch beyond the folded wings. Length, 6.5 inches ; spread, 12.5.

HISTORY.—This species was first distinguished from the Wood Pewee, which it much resembles, by William Cooper, in 1829, and was described and named, in honor of its discoverer, by Mr. Nuttall. Its range is from Texas to the 58d parallel of latitude, and from New England to Oregon. It is a rare bird in New England, but numbers of them spend the summer and rear their young here. For the specimen, from which the above description was made, I was indebted to my friend C. S. Paine, who

shot it in Randolph, in this state. The nest of this King Bird is usually built in the top of an evergreen, from 30 to 50 feet from the ground, and resembles, somewhat, that of the common King Bird. The eggs, four in number, are of a yellowish cream-color, thinly sprinkled with dark brown and purple spots. A nest, found by Mr. Paine, was on a horizontal branch of a tall hemlock, standing alone in a pasture, near the border of woods. The nest, containing three eggs, was composed of twigs, moss, and a few blades of grass. It was very flat, and slovenly put together. This bird manifests much uneasiness and anger, when its nest is approached, erecting its crest, and becoming very clamorous. These birds are known to breed, in the same locality, several years in succession.

TRAILL'S FLY-CATCHER.

Muscicapa traillii.—AUD.

DESCRIPTION.—Color of the head and body above, dark glossy olive green ; circle round the eye and streak towards the bill, pale yellow. Wings, dark hair brown ; secondaries and wing coverts edged with dull white, forming two bars across the wings. Bill, blackish above, flesh-colored beneath. Chin and throat yellowish white ; breast, ashy brown ; belly, and under tail coverts, pale sulphur yellow. Legs black. Tail emarginate. Length, 5.75 ; spread 8.75.

HISTORY.—This species bears a very strong resemblance to the *M. flaviventris*. It is quite a common bird at some places along the east side of the Green Mountains, in Vermont, particularly along the second branch of White River, in Bethel and Randolph, where, I am informed by my friend, Paine, it rears its young in large numbers. Its nest is usually built in a low bush, by the side of a stream, from one to four feet from the ground. The nest is composed, outwardly, of wild grass and wool, and lined with very fine grass and weeds. It is very snugly put together, and nearly two inches deep. The eggs, usually three, are of a yellowish white color, sparsely sprinkled with light umber toward the larger end.

THE AMERICAN REDSTART.

Muscicapa ruticilla.—LINNÆUS.

DESCRIPTION.—Upper parts, bill, chin and breast, black ; sides of the breast, base of the primaries and of the tail feathers, excepting the two middle ones, fine reddish orange, sometimes approaching scarlet. Belly white. Female and young olive

BLACK-CAP WARBLER. WARBLING VIREO. OLIVE-BACKED THRUSH. BLACKPOLL WARBLER.

brown above, head cinereous; beneath, yellowish white. Sides of the breast, base of the quills and tail feathers, yellow, where they are orange in the male. Bill and legs smoky olive. Notch in the bill small. Second and third primaries subequal and longest. Length, 5 inches; spread, 6.5.

HISTORY.—This beautiful little bird is found in all parts of the United States, and extends its summer migrations as far north as the 62d parallel of latitude. It arrives in Vermont about the middle of May. It is a shy and retiring bird, confining itself to the forests and groves. It builds its nest, usually, between the forked branches of a small tree, or sapling, 10 or 12 feet from the ground. The nest is very securely and neatly built, being made of fibres and shreds of bark, very firmly agglutinated together. The eggs, 3 or 4 in number, are of a light cream color, thickly sprinkled with different shades of yellowish brown, particularly towards the large end.

THE GREEN BLACK-CAP WARBLER.

Muscicapa pusilla.—WILSON.

DESCRIPTION.—Crown, glossy black; back, rump, and upper tail coverts, olive green. Frontlet, line over the eye, and all beneath, bright lemon yellow. Tail and wings, hair brown, the feathers having their outer vanes edged with yellow olive. Bill, brown; legs, flesh color. No part white. Second and third quills longest, subequal. Tail long and rounded, reaching more than one inch beyond the tips of the folded wings. *Female and young* without the black crown. Length, 4.5 inches; spread, 6.5.

HISTORY.—This species appears to be very widely diffused, being found in Labrador, in latitude 58° north, where it breeds, and as far westward as Columbia river. According to DeKay, it arrives in New York early in May, but is in that state exceedingly rare. Their nests are built on low bushes, in which they lay about four grayish eggs, which are sprinkled with reddish dots, in a circle around the larger end.

THE WARBLING VIREO.

Vireo gilvus.—BONAPARTE.

DESCRIPTION.—Pale greenish olive. Head and upper part of the neck, dark ash, approaching to brown. Line over and beneath the eye, and extending from the eye to the nostril, light ash. Wings and tail, hair brown, the feathers edged with greenish gray. Upper mandible dark horn color, the lower one lighter. Chin and under

parts dull greenish white. Sides of the body and beneath the wings, dull greenish yellow. Legs, bluish brown. Length, 5 inches; spread, 8.

HISTORY.—This Vireo, though plain and unadorned in plumage, is one of the most musical of the feathered warblers. Its range is through the whole extent of the United States, from the Atlantic to the Pacific. The nest of the Warbling Vireo is usually pendulous, and placed in the very summits of the loftiest trees. Nuttall has found them elevated to the airy height of more than 100 feet from the ground. The nest is made of the fibres of weeds and shreds of bark, and lined with grass. The eggs are from 4 to 6, white, with confluent spots and thread-like lines towards the larger end. My friend, C. S. Paine, who kindly favored me with a specimen of this bird, and its nest, which was built in the top of a lofty elm, near his dwelling, in Randolph, assures me that the favorite resort of the Warbling Vireo is among the trees and bushes, growing by the side of ponds and streams.

THE OLIVE-BACKED THRUSH.

Merula olivacea.—GIRAUD.

DESCRIPTION.—General color above, yellowish olive brown; breast and throat buff, spotted with black; belly, soiled white, spotted with reddish brown. Bill, brown, short and robust. Legs, flesh color, line from the bill to the eye slightly rufous. Outer webs of the primaries, yellowish. Lower tail coverts, white. Second primary longest, first and third nearly equal.—Length, 6.5 inches; spread, 11. Length of the tarsus 1 inch. Tail extends 1 inch beyond the folded wings.

HISTORY.—This species was long regarded as a variety of the Hermit Thrush, *M. solitaria*. It was first shown to be a distinct species by Mr. DeRhane, and was first described and named by Mr. Giraud, in his Birds of Long Island. This bird rears its young in Vermont, and is not very rare. Its nest, which is built on the ground in the woods, is composed of leaves and vines, and lined with fine roots. It has 4 light blue eggs, but somewhat darker than those of the Hermit Thrush, or very nearly the color of those of the Robin. It probably rears two broods in a season, since my friend Paine assures me, that he has found their nests, containing eggs, in the months of June, July and August.

THE BLACK-POLL WARBLER.

Sylvia striata.—WILSON.

DESCRIPTION.—Head deep glossy black; back mottled with black, white and dark

RED-POLL WARBLER.

CANADA WARBLER.

HEMLOCK WARBLER.

MOURNING WARBLER.

ash. Cheeks, collar round the neck, and under parts generally, white, largely spotted with black on the breast and sides; line of black spots from the chin towards the shoulders. Two white bars on the wings. Primaries brown, edged on their outer webs with greenish yellow. Tail, wood brown, the two outer feathers on each side having large white spots on their inner webs. Bill, dark horn color. Tail emarginate, reaching three-fourths of an inch beyond the folded wings. Legs, flesh color. *Female* and *young* dull yellowish olive, streaked with black and gray. Length 5 inches; spread, 8.

HISTORY.—The Blackpoll Warbler is pretty generally diffused over the United States, and has been observed as far north as the 54th parallel of latitude. Audubon found the nest of this species in Labrador, built in the forked branches of a fir tree, about three feet from the ground. It was formed of mosses and lichens, lined first with coarse dried grass, then with fine moss, and lastly with feathers. The nest contained 4 eggs, but he has given no description of them. It probably breeds in Vermont, but I am not aware that its nest has ever been found here.

THE RED-POLL WARBLER.

Sylvia ruficapilla.—LATHAM.

DESCRIPTION.—General aspect brownish olive, streaked with dusky brown; crown dark rufous. Line over the eye, and all beneath, yellow. The two lateral tail feathers with large spots of white on their inner webs, extending to their tips. The yellow on the breast streaked and spotted with bay. Legs and bill dusky brown. The first three quills nearly equal, second longest. Tail slightly notched, and reaches one inch beyond the folded wings. *Female* without the rufous crown, and having the spots on the breast brown instead of bay. In the young male the crown is spotted with bay, and the breast yellowish brown. Length, 4.75; spread, 7.5.

HISTORY.—The history of this little warbler appears to be very little known. I have two specimens, a male and a female, from which the above description is drawn. They were both shot by my friend Paine, in Orange county, in 1848, one on the 20th of April and the other in September. It has been observed, according to DeKay, from Mexico to the 55th degree of north latitude. Whether it breeds or not in Vermont, I have not been able to ascertain.

THE CANADA WARBLER.

Sylvia pardalina.—BONAPARTE.

DESCRIPTION.—All the upper parts bluish

ash, with central parts of the feathers on the head, black, giving it a dark spotted appearance. Wings and tail brown, edged with grayish. Line under the eye descending down the side of the throat towards the shoulders, black. Spot in the forehead, a broad line towards the eye, and all beneath, bright lemon yellow. A broad rounded band of black spots across the breast, forming a sort of collar. Under tail coverts white, tinged with yellow. Upper mandible brownish; the lower mandible, the legs and feet, flesh color. Second and third primaries subequal, longest. Tail long, rounded, reaching 1.2 beyond the tips of the folded wings. The female is greenish above, and all its markings less distinct. Length, 5 inches; spread, 8.5.

HISTORY.—This is a rare species, being only occasionally met with in Vermont. It breeds, according to Audubon, in Pennsylvania, Maine, and the British Provinces, and if so, it doubtless breeds in Vermont, though I am not aware that its nest has been found here. It is said to range as far north as the 55th degree of latitude. The nest is usually built in a low evergreen. The eggs, about five in number, are white, with a few dots of brownish red.

THE HEMLOCK WARBLER.

Sylvia parus.—WILSON.

DESCRIPTION.—Color above greenish yellow, striped with dusky; bill, wings and tail brownish black; two white bars on the wings; quills edged with greenish. Line over the eye, throat and neck yellow; beneath, yellow, streaked with dusky on the breast and sides; under tail coverts white; patches of white on the inner webs of the two outer tail feathers; legs and under mandible greenish yellow. First quill longest; tail emarginate. Length, 5.25; spread, 8.5.

HISTORY.—This bird resides, for the most part, in thick Hemlock forests, and hence it has derived its name. Its nest, according to Audubon, is usually built in a hemlock or spruce, at a considerable elevation from the ground, and is composed of slender twigs and lichens, and lined with hair and feathers. The specimen above described was shot in Randolph, and the bird, no doubt, breeds here.

THE MOURNING WARBLER.

Sylvia philadelphia.—WILSON.

DESCRIPTION.—Head and sides of the neck bluish slate; upper parts of the body, wings and tail, dark yellowish olive-green; space before the eye, and frontlet, black.

PARTI-COLORED WARBLER. MEALY REDPOLL. ROSE-BREASTED GROSBEEK. SCARLET TANAGER.

Chin, throat and sides of the neck bluish gray. Breast black, with numerous fine crescent-shaped blue-gray lines. Beneath bright lustrous yellow. Bill smoky horn color; legs flesh color. In the female and the young, the throat and breast are buff, the latter much the darkest, and all the upper parts are a greenish olive. Length, 5 inches; spread, 7.5.

HISTORY.—The Mourning Warbler derives its name from its peculiar melancholy notes. The specimen, from which the above description is chiefly drawn, was shot by my friend, C. S. Paine, in Randolph, on the 4th of July. It was a male, had with it a mate and a brood of young ones, just able to fly. This warbler is a rare bird, and is of shy and solitary habits. Its range, so far as at present ascertained, is between the 28d and 47th parallels of latitude.

THE PARTI-COLORED WARBLER.

Sylvia americana.—LATHAM.

DESCRIPTION.—Color pale blue above, with a large golden amber spot on the back. Upper mandible black; lower, yellowish. Chin, throat and lower part of the breast, bright yellow. A blackish collar, bordered below with amber, mixed with yellow. Sides, under the edges of the folded wings, spotted with bay. Belly bluish white. Two white bars on the wings; and outer tail feathers largely spotted with white, on their inner webs. Wings and tail brown, the quills and feathers edged with light blue, on their outer webs. Legs and feet fuliginous. Three first quills nearly equal. *Female* without the dark collar on the breast. Length, 4.5, spread, 6.4 inches.

HISTORY.—This very beautiful little warbler ranges from Mexico to the 46th parallel of latitude, and is very common in the western states. It arrives in New England about the beginning of May. Its nest, according to Audubon, is built in the upright forks of small trees, and is composed principally of lichens, lined with downy substances. The eggs, about 4, are white, with a few reddish dots near the larger end.

THE MEALY REDPOLL.

Fringilla borealis.—SAVI.

DESCRIPTION.—Above dusky, streaked with yellowish white and rusty. Wings and tail, hair-brown, the feathers edged and tipped with yellowish white. Rump whitish. Crown dark rich crimson. Frontlet, lores and throat black. Beneath, grayish white, streaked with dusky. Legs, feet and nails black. Cheeks, sides of the body

and posterior part of the rump, in the male, pale carmine. First primary longest, second and third nearly equal. Bill yellow, brownish towards the point; very acute, upper mandible longest. Hind nail long as the toe. Length, 5.5 inches; spread, 9.

HISTORY.—This species, though very rare, is quite widely diffused, being found in Maine, New Jersey and Oregon. The specimen from which the above description was made, was shot in Randolph, in the winter of 1850. They appeared there in flocks, and fed upon the seeds of weeds, which projected through the snow, in the open fields. They were not seen in the forests. Its notes were very much like those of the common yellow bird, *F. tristis*. In appearance it very closely resembles the Lesser Redpoll, *F. linaria*;—so closely that there is some difficulty in distinguishing them. It is, however, somewhat larger, and its colors a little lighter, particularly on the rump.

THE ROSE-BREASTED GROSBEEK.

Coccyzus ludovicianus.—LINNÆUS.

DESCRIPTION.—Head, chin and upper parts mostly black, varied with white on the wings and rump. Tail and wings brownish, with a broad white bar across the quills of the latter, and a narrower one on the wing coverts. Breast and under wing coverts carmine, or bright rose color. Beneath, yellowish white. Bill, cream color; legs and feet grayish brown. *Female* brown above, spotted with dull white on the wings; three yellowish white bands on the head, one passing from the bill over the crown to the occiput, and one passing along each side of the head, just over the eye. Feathers on the breast yellowish, with a brown central streak; under wing coverts sulphur yellow; no rose color. Bill brown horn color. Tail slightly emarginate. Bill notched near the point. Second quill longest. Length, 8 inches; spread, 13.

HISTORY.—The range of this bird is said to be from Texas to the 56th parallel of latitude. Though not numerous in Vermont, they are frequently met with and rear their young here. Its nest is usually built in thick forests, at a considerable height from the ground, and composed of twigs and lined with grass. The eggs are 4 or 5, bluish and spotted with brown.

THE SCARLET TANAGER.

Tanager rubra.—LINNÆUS.

DESCRIPTION.—The bill robust, rather short, compressed towards the point, and acute. The second quill longest. Tail slightly forked. In the *male*, the plumage

CRESTED WOODPECKER.

CHIMNEY SWALLOW.

SWALLOW TREES.

is of a brilliant scarlet, excepting the wings and tail, which are black, and the under wing coverts, which are yellow. Bill and legs brownish horn color. *Female* and *young* dull green, or brownish yellow. Wings and tail, brown, with the feathers edged with greenish. Color of the bill and legs lighter than in the male. Length, 6.6 inches; spread, 10.5.

HISTORY.—This bird, on account of the bright red color of the male, is sometimes called the *Fire Bird*. It is also known in many places as the *Blackwinged Red Bird*. It rears its young in Vermont, but is said to extend its summer migrations northward, as far as the 69th parallel of latitude. Its nest is usually built on the horizontal branch of a forest tree, 10 or 15 feet from the ground. It is composed of sticks, weeds and vines, nicely put together, and lined with finer materials. The eggs are usually 4, of a dull blue color, spotted with different shades of brown. It is a shy bird, occupying retired places, and manifests great solicitude for the safety of its young. One of the nests of this bird, found by my indefatigable friend, Paine, in Randolph, was on the branch of a maple, in the skirt of a forest, was 10 feet from the ground, and composed of hemlock twigs, laced and bound together with fibrous weeds and strings. It was 1.5 inch deep, and contained three eggs. The male bird showed much uneasiness when the discoverer approached the nest.

THE CRESTED WOODPECKER.

Picus pileatus.—LINNÆUS.

DESCRIPTION.—General color black. Chin white, with a rusty white stripe over the eye, and another from the nostril extending backward along the side of the neck to the base of the wings, which are, on the under side, of a delicate straw color. Vanes of the basal part of the wing feathers, white on the upper side, but nearly concealed by the wing coverts, when the wing is closed. Crest and mustachios, in the male, bright yellowish carmine red; crown variegated with black and golden yellow. Irides bright orange; bill and claws dark horn color, the bill a little lighter below, sharply ridged above and on the sides; with the mandibles, which are of equal length, brought to vertical cutting edges at their points. Tongue slender, protractile and barbed towards the point. Tail wedge-shaped; feathers 12, stiff and pointed, central ones longest. Length of the specimen here described, which was a female, 18 inches; spread, 28; from the point of the bill to the feathers 2.4; to the top of the crest 4.5. Length of the folded wing, 9.5,—tail, 7,

reaching three inches beyond the tip of the folded wing.

HISTORY.—For the specimen here described I was indebted to Mr. Austin Isham, of Williston, who shot it near Shelburne pond, on the 10th of November, 1851. It was a female, and on skinning and dissecting it, I found in its craw more than 100 flat, jointed worms. They were, most of them, entire, about an inch long, and of a yellowish white color; such, in short, as are very common between the bark and wood of old trees. The gizzard contained parts of worms, and a large quantity of the fragments of ants and coleopterous insects, but no gravel.

Though no where numerous, this Woodpecker is found in all parts of the United States and as far north as the 63d parallel of latitude. In Vermont it has been very generally called the Woodcock. It is a very restless and retired bird, confining himself chiefly to the depths of the forests, and hence he is much more frequently heard than seen. In the early part of spring, as is well known to those employed at that season in the manufacture of maple sugar, his loud cackle and the sound of his powerful blows upon the old trees, are heard, reverberating through the naked forests, to a great distance. Like the other woodpeckers, it builds its nest in a cavity, hollowed out of an old tree, and lays about 6 purely white eggs.

CHIMNEY SWALLOW,—(Part I—38.)

Cypselus pelagius.—TEM.

In our account of this bird, we spoke of its habit, when the country was new, of resorting in immense numbers to hollow trees, in spring and autumn, and that there were many trees in this state, which were, on that account, extensively known as *swallow trees*. Many of these trees had, probably, been resorted to by thousands of birds, year after year, for centuries. The consequence would naturally be, that the hollow, in which they roosted, would be gradually filled up from the bottom, by the excrement, cast off feathers, exuvia of insects, and rotten wood; and trees have been often found in this condition, long after the swallows had ceased to resort to them; and even after they had been blown down, and had become rotten by lying. One of this kind, in Ohio, is described in Harris' Journal, and quoted in Wilson's Ornithology. The tree was a sycamore, five feet in diameter, which had been blown down, and whose immense hollow was found filled, for the space of 15 feet, with a "mass of decayed feathers, with an admixture of

CHIMNEY SWALLOW.

PASSENGER PIGEON.

AMERICAN BITTERN.

brownish dust and the exuvia of various insects."

The remains of a tree of this description were found in this state, in Middlebury, so lately as the spring of 1852. The tree had been blown down, and had, nearly all, rotted away, leaving little besides the cylindrical mass, which had filled its hollow. The length of this mass was about seven feet, and its diameter 15 inches. Of the materials, which composed it, about one half consisted of the feathers of the Chimney Swallow, being, for the most part, wing and tail-feathers. The other half was made up of exuvia of insects, mostly fragments and eggs of the large wood-ant, and a brown substance, probably derived from the decayed wood of the interior of the tree.

This discovery at Middlebury, though interesting, would not have been regarded as very remarkable, if the materials, which had filled the hollow of the tree, had been promiscuously and disorderly mingled together. Such a jumbled mass would be what we should expect to find in a hollow tree which had been, for centuries, perhaps, the roosting place of myriads of Swallows. But this is not the case. In their general arrangement, the larger feathers have nearly all their quills pointing outward, while their plumes, or ends on which their webs are arranged, point inward. This arrangement might perhaps have arisen from the nesting of small quadrupeds in the hollow, making the feathers their bed. But this is not the most remarkable circumstance connected with the subject. In various parts of the mass, are found, in some cases, all the primary feathers of the wing; in others, all the feathers of the tail, lying together in contact, and in precisely the same order and position, in which they are found in the living swallow. In a lump of the materials, measuring not more than 7 inches by 5, and less than 3 inches thick, five wings and two tails were plainly seen, with their feathers arranged as above mentioned, and, in one of the wings, all the secondary quills were also arranged in their true position with regard to the primaries.

Now, we cannot conceive it possible that these feathers could be shed by living birds, and be thus deposited. We may suppose that the birds died there, and that their flesh had been removed by decay, or by insects, without deranging the feathers. But in that case, what has become of the skeletons? I do not learn that a bone, beak, or claw, has been found in any part of the whole mass. What, then, has become of these? They could hardly have been removed by violent means, without disturb-

ing the feathers. But, if done quietly, what did it? What insect would devour the bones, and beaks, and claws, and not meddle with the quills? Or would the formic, or any other acid, which might be generated within the mass, dissolve the former without affecting the latter? These are questions, to which the savans have not yet returned any satisfactory response.

A specimen, from the above mentioned feathery mass, was obtained, in May, 1852, by Mr. J. A. Jameson, Tutor in the University of Vermont, and presented, by him, to the Museum of that Institution, to be preserved as a relic of primeval Vermont.

PASSENGER PIGEON.—(Part I, p. 100.)

Columba migratoria.—LINN.

Having learned that Pigeons had appeared and reared their young in large numbers, in the spring of 1849, in several towns on the Green Mountains, particularly in Fayston and Warren, in Washington county, and being desirous in case they should return there the next spring, to visit the localities, for the purpose of observing the habits of the Pigeons, and securing some of their eggs for specimens, I addressed a note of inquiry to Jacob Boyce, Esq., of Fayston. To this note I received the following reply:

FAYSTON, June 28, 1850.

MR. THOMPSON:

Sir,—I have received yours of the 10th inst., requesting information about Pigeons. They are not here the present season. Last year they came here early in April, and commenced building their nests by the middle of that month; and they left here with their young, about the middle of June. Their nests extended over a territory of, at least, 2,000 acres. Above the height of 25 feet from the ground, the tops of the trees were covered with nests. Some large birches had from 100 to 125 nests on a tree. The nests consisted of bunches of sticks, placed in the crotches of the limbs. They laid only two eggs in a nest, and raised only one brood. There might have been any quantity of eggs obtained from the nests; and great numbers of eggs rolled out of the nests and lay scattered on the ground, but I do not know that any of the eggs were preserved.

Respectfully yours,
JACOB BOYCE.

AMERICAN BITTERN.

Ardea minor.—WILSON.

DESCRIPTION.—General color yellowish ferruginous, mottled and sprinkled with

AMERICAN BITTERN.

GREATER YELLOW-SHANKS.

SEMI-PALMATED SANDPIPER.

dark brown. Crown dusky reddish brown. Chin and throat white, with reddish brown stripe. From the angle of the mouth a brownish black stripe proceeds downward, becoming broader on the side of the neck, and turning upwards towards the back side, where it is lost. The quills are also brownish black. Feathers of the neck and breast have their central part along the shaft dark yellow, sprinkled thickly with brown, broadly margined with tawny cream color. Dorsal plumage dark umber brown, with the feathers edged and spotted with yellowish brown and tawny white. Plumage about the vent and inside of the thighs, ochre-yellow. Legs, feet and nails greenish olive-brown. Bill dark greenish horn color, longer than the head, straight beneath, moderately arched above, stout, pointed, serrated on both mandibles, and, on the upper, notched towards the point. Tibia bare nearly an inch above the joint. Middle toe longest, pectinated. Hind nail longest. Feathers on the back of the head and neck loose and elongated. Tail small, rounded, and of 10 feathers. Length of the specimen before me, which is a female, 25 inches. Bill, along the gape, 4, along the ridge, 2.6; neck 11; folded wing 10; tail 3; tarsus 3; longest toe 3; longest nail 1.2.

HISTORY.—The specimen of American Bittern described above, was presented to me by my friend, N. A. Tucker, Esq. It was shot by him in his garden, in Burlington village, where it had alighted, on the 30th of April, 1845. It was a female, and contained several eggs, which were somewhat enlarged. About the first of June, Prof. J. Torrey found the nest of one of these birds in a swamp, in the east part of Burlington. It was made on the ground, of sticks and grass, was very shallow, and contained 6 eggs. The eggs were of a dark bluish brown clay color, and contained young, which were considerably advanced.

This bird is called by a great variety of names, but is most generally known in Vermont by the name of *Stake Driver*. This name is given it, on account of the resemblance of the sound, it makes in the breeding season, to that made by a smart blow and its echo, in driving a stake into the ground, resembling somewhat the uncouth syllables of 'pump-au-gah. It is a sly, solitary bird, and feeds on mice, aquatic reptiles and the larger insects, and though not often seen, its sound is not unfrequently heard during the summer, proceeding from the depths of the swamps, in various parts of the state. Its range, according to DeKay, is between the 38th and 58th parallels of latitude.

THE GREATER YELLOW-SHANKS.

Totanus melanoleucas.—GEMLIN.

DESCRIPTION.—Color of the upper parts brown, spotted with black and white. Bill, black; rump and tail dusky white, barred with brown. Throat, belly, and under tail coverts, white. Legs and feet yellow. A small black spot before the angle of the eye. Shaft of the first primary white. Length, 18 inches; folded wing, 7.25; bill, along the ridge, 2.1; under mandible shorter, and both cylindrical towards the point. Tarsus 2.5 inches long; middle toe to the nail 1.5. A short web between the inner and middle toes.

HISTORY.—This bird appears in Vermont in the latter part of May, proceeding northward, where it is found in the summer up to the 60th degree of latitude. Some of them, however, remain in Vermont through the summer, and breed here. It builds its nest, according to Nuttall, in a tuft of rank grass, on the border of a creek or bog, and lays 4 eggs of a dingy white color, marked with spots of dark brown. The eggs are said to be remarkably large for the size of the bird. Perhaps its most common vulgar name is that of *Tell-Tale*.

THE SEMI-PALMATED SANDPIPER.

Tringa semipalmata.—WILSON.]

DESCRIPTION.—The bill is shorter than the head, straight, enlarged and flattened towards the end, and acutely pointed at the tip. Tibia one-fourth naked; tarsus compressed and of the length of the bill. Hind toe short and small. First quill longest. Tail pointed, reaching beyond the folded wings; middle feathers longest. The color of the bill is black; the legs dark dusky olive. General color above grayish ash, thickly streaked and spotted with dusky brown, while the feathers are edged with light gray and rufous. Frontlet and line over the eye, light gray. All beneath, white, excepting the breast and lower front of the neck, which are gray, with brownish spots and streaks. Length, 6 inches; folded wing, 8.7; bill and tarsus each 0.8; middle toe, which is longest, including the nail, 0.8.

HISTORY.—This little Sandpiper ranges through all parts of the United States. It appears in Vermont in May, and remains here till autumn, and undoubtedly breeds here, although I have not seen its nest. According to Nuttall, it makes its nest, early in June, of withered grass, and lays 4 or 5 eggs, which are white, spotted with brown. For the specimen above described I am indebted to Mr. C. S. Paine, of Randolph, who shot it in the fall of 1850.

RED-THROATED LOON.

Colymbus septentrionalis.

DESCRIPTION.—Color of the head and upper parts of the neck, deep ash. Chin and sides of the mouth, white. Sides of the throat and neck, white, spotted, or striped with ash. Upper parts brownish, spotted with white, the feathers usually having a white spot on each side toward the point. White beneath, with a brownish transverse band across the vent. Wings brownish black; second quill longest, first nearly equal. Tarsus much compressed, with a slight web along the edge, black on the outside and whitish on the inner side. Outward side of the feet, and a part of the web on the inner side, blackish. Bill bluish black, lightest towards the point, narrow and pointed; upper mandible longest and a little curved; lower, incurved on the sides, acute at the tip and grooved beneath. Tongue pointed, with a fringe at the base directed inward. Eye moderate; irides dark purple; pupils black. Length of the specimen above described, which is evidently a young fowl, 24 inches; bill, along the ridge, 1.7, beneath, 1.9, along the gap, 2.9; folded wing, 10.6; tarsus, 8.2; longest toe, (the outer,) 8.2, nail 0.8. Tail very short and rounded, reaching two inches beyond the folded wings. Adults have the head lead color, the upper parts blackish, the belly white, and a reddish stripe along the throat and neck.

HISTORY.—The Loon above described was shot in Burlington Bay, on the 1st day of November, 1846. It is very rare in Vermont, in comparison with the *C. glacialis*, or Great Northern Diver, described in Part I, p. 111. They are common in the northern parts of both continents, and rear their young in the neighborhood of fresh water lakes. They lay their eggs, 2 in number, on a small quantity of down, or other soft materials, near the edge of the water. They are of a pale oil-green color, and are nearly 8 inches long and 1½ in thickness. This fowl is called, in England, the Sprat Loon, by the fishermen. It is known in some places by the name of Scape Grace.

NOTE.—In Part I, Chap. III, we have described 141 species of Vermont Birds; and we have in this Appendix described 20 additional species, making the whole number described 161 species. And even this number falls very considerably short of the whole number of species found in the state. I have specimens of several species, which are not here described, on account of doubts with regard to their proper names. And it is well known that we have a considerable number of ducks and other water fowl, which spend some time with us, in spring

and fall, in their annual migrations north and south. The Swan, *Cygnus americanus*, is occasionally met with, even in the small ponds in the interior of the state. My friend, Dr. Ariel Hunton, of Hydepark, informs me that a Swan was shot in Mud pond, in Cambridge, by Mr. Eliel Page, in 1841. It was very large, said to be six feet high, to spread its wings eight feet, and to weigh 57 pounds. These statements are doubtless exaggerated, particularly the last. The length of the American Swan is usually stated at about 5 feet, and spread 7 feet.

REPTILES OF VERMONT.

Additional to Part I, Chapter IV.

Although we are well satisfied that we have a considerable number of species of reptiles, which are not embraced in our list in Part I, page 118, we shall here add only the two following:

Emys geographica, Geographic Tortoise.
Trionyx ferox, Soft-shelled Tortoise.

GEOGRAPHIC TORTOISE.

Emys geographica.—LE SUEUR.

DESCRIPTION.—Shell oval, rather depressed, smooth, widely emarginate in front, serrated behind, and deeply notched over the tail. Vertebral plates slightly carinate, the first hexagonal, rounded in front—the three following somewhat larger, subequal, and hexagonal. The two intermediate lateral plates largest, and pentagonal—the posterior rhomboidal. Marginal plates 25, the three first on each side subequal, with a nearly equal margin,—the three following restricted, with their outward margins turned upwards; the seventh slightly turned upwards and widening posteriorly. The five remaining ones on each side are two toothed on their outer margins, the bidentations becoming more distinct to the last. Sternum deeply notched behind, and slightly before—scapular plates small, triangular—brachial plates truncate, triangular; third pair of plates narrow, with their exterior edges projecting laterally and backward, and joining the 4th and 5th marginal plates at their junction,—the fourth pair largest and joining the fifth marginal plate and a small intermediate one; five pairs of trapeziums, with the longest of the parallel sides outward; caudal plates rounded posteriorly, with the two straight sides forming an acute angle. Head moderately large; edges of the jaws very sharp. Legs rather long; upper sides of the fore legs covered with flat roundish scales, largest on the outer margin; fore feet armed with five

GEOGRAPHIC TORTOISE.

SOFT-SHELLED TORTOISE.

sharp incurved claws; hind feet broad, palmate, covered with flat scales towards the posterior margin, and armed with five claws, longer but less curved than on the fore feet. *Tail* conical, pointed, and reaching 1½ inch beyond the shell. *Color*, greenish brown, with meandering yellow lines, crossing one another in various directions. Under side of the marginal plates greenish yellow, with numerous and somewhat regular brown markings. *Sternum*, yellowish flesh-color. Head, neck and legs, beautifully striped with brownish and yellow. Jaws of a uniform yellowish amber,—a yellow spot on each side of the head, back of the eye. *Eyes* yellow, with a horizontal black stripe. *Sutures*, at the junction of the plates above, a little elevated. Length of the shell, 10 inches, breadth, 8.5; length of the head, 2.75; width, 1.8; between the orbits, 0.5; width of the palmated hind foot, 2.4; length of the tail, from the attachment of the vertebrae, 3.3; beyond the shell, 1.25.

HISTORY.—The specimen here described, was taken in Colchester, near the mouth of Winooski river, on the 28th of May, 1846. It was a female, containing 14 mature eggs in the oviduct, with about the same number, considerably developed, and innumerable small ones, in the ovaries. She was crawling very fast over the sandy plain, when taken, and was evidently in search of a suitable place for depositing her eggs. The form of the mature eggs, was that of an ellipsoid, with one end a trifle larger than the other, and they differed not sensibly in size, being 1.4 inch long, 0.9 thick, and having their greatest circumference 3.7 in., and least, 2.9. The oviduct, containing the mature eggs, was taken from the abdomen, cut into three pieces, and laid aside, and, in the course of ten minutes, by repeated visible contractions, or throes, all the eggs were expelled from it.

Another female of this species was taken, June 10th, 1846, near Clay Point, in Colchester. She was sitting over a hole she had excavated in the sand, in the act of depositing her eggs, and made no effort to escape when approached. Her oviduct was filled with mature eggs. I learn that in ploughing the sandy lands near this Point, nests of this tortoise, containing from 12 to 20 eggs, have been frequently laid open.

The chief habitat of this species is in the states at the south-west, and I was not aware of its existence in New England, at the time of the publication of my History of Vermont, in 1842. Since that time, I have found that it is quite common all along the eastern shore of Lake Champlain. It has not, however, to my knowledge, been found any where else in New England; and, for

the present, this may be regarded as its eastern limit.

The dimensions of the shell of this species, given by Dr. DeKay, are: length, 6.5 in.; breadth, 5, and height 3. Most of those observed in this vicinity have been from 7 to 10 inches long, and from 6 to 8.5 broad. Their flesh is said to be a very palatable article of food.

GENUS *TRIONYX*.—*Geoffroy*.

Generic Characters.—Shell without plates, and, together with the sternum, cartilaginous, and extending over the edges into a flexible margin. Feet palmated, with three sharp claws. A corneous beak, covered with fleshy lips. Nose produced. Vent near the extremity of the tail.



SOFT-SHELLED TORTOISE.

Trionyx ferox.—*Gmelin*.

DESCRIPTION.—General color of the shell brownish olive, above, with ocellated spots, formed mostly by a circular arrangement of black dots, and with a border formed of black dots around the margin of the shell. The spots are usually about the size of a dime. In dried specimens, the color is nearly black, and the spots very obscure. All the under parts dull white, or light flesh-color. A bright yellow line, edged on both sides with black, extends from the snout to each eye, and from the eyes backwards, till lost in the marbling of the neck. Irides bright yellow, crossed by a black medial stripe. Upper side of the legs variegated with black and yellow. Form orbicular; shell bony in the central part, with the margin cartilaginous, soft and flexible. Head long and pointed, snout projecting beyond the jaws, with large open nostrils at the extremity. Jaws horny, with the lips fleshy and revolute. Upper side of the legs, next the margin of the shell, covered with horny scales. Five toes on each foot, three of which have well developed claws, the others are enveloped in a web, forming paddles for swimming. Tail projects less than an inch beyond the shell, with the vent near the extremity.

SOFT-SHELLED TORTOISE.

FISHES OF VERMONT.

GROUND PIKE-PERCH.

Dimensions:—Length of the shell, 13 inches; breadth, 10 $\frac{3}{4}$; height, 3 $\frac{1}{2}$; head, 2 $\frac{1}{2}$; head and neck, 7.

HISTORY.—The existence of this species of Tortoise in our waters, was not even suspected by me at the time of the publication of my History of Vermont, in 1842. My first specimen of it, I obtained on the 10th of August, 1844. It was caught on a fish-hook, in the river Lamoille, in Milton, by Mr. Joseph Dupau, to whom I have been indebted for many interesting specimens of reptiles and fishes. Since that time I have obtained several other specimens, which were taken in or near the mouth of Winoski river, in Burlington. Most of these I kept alive for some weeks, but I could induce none of them to take any food; and, although it might be inferred, from the name, *ferox*, that they were of a ferocious disposition, I could never cause either of them to bite at a stick, notwithstanding I frequently provoked them for that purpose.

The specimen, which furnished the materials for the preceding description, was taken in a seine, at the mouth of Winoski river, on the 6th of May, 1848. I kept it alive till about the middle of June, when I killed and skinned it. It was a female, and her ovary contained 29 eggs, enlarged to near the size of a musket ball, besides innumerable minute eggs.

The *Trionyx ferox*, though common in the western waters, has not, to my knowledge, been found any where in New England, excepting the western parts of Vermont, along the margin of Lake Champlain; but it would seem, from the dimensions given by naturalists, that it attains a larger size here than at the west, where it is more common. The shells of three specimens, taken in this vicinity, measured as follows, viz:

Length.	Breadth.	Height.
1. 11 inches;	9.5 inches.	2.2 inches.
2. 13 "	10.75 "	3.2 "
3. 13.5 "	11 "	3.5 "

The dimension of the shell of this species, given by Dr. DeKay, Zoology of New York, Part III, p. 6, are: length, 5.3 in.; breadth, 5 in.; height, 1.4.

This species resembles the sea-turtle, in its structure and habits, much more than our other tortoises. It leads a more aquatic life, and, probably seldom, if ever, crawls out upon the land, except for the purpose of depositing its eggs. On account of the shortness of its legs, and the great width of the shell, it travels upon land with much difficulty, especially where the surface is uneven, or covered with vegetation. Its flesh is esteemed a wholesome and nutritious article of food.

FISHES OF VERMONT.

Additional to Part I, Chapter v.

To our list of Vermont Fishes, given in Part I, page 128, we now add the following species:

<i>Lucio-perca canadensis</i> ,	Ground Pike Perch.
<i>Boleosoma tassellatum</i> ,	Darter.
<i>Cottus gobioides</i> ,	Little Stargazer.
<i>Leuciscus atromaculatus</i> ,	Small scaled Dace.
<i>Esox nobilior</i> ,	Masquallonge.
<i>Salmo perca pellucida</i> ,	Trout Perch.
<i>Coregonus clupeiformis</i> ,	Herring Salmon.
<i>Amia ocellicauda</i> ,	Bowfin.

THE GROUND PIKE-PERCH.

Lucio-perca canadensis.—SMITH.

L. grisea, DeKAY, Zoology of New York, Part IV., page 19.

DESCRIPTION.—General form elongated, cylindrical, and proportionally more slender along the abdomen than in the common Pike-Perch, but the head and opercles resemble that species very closely. The preoperculum is finely serrated on the posterior margin, and more coarsely below. There are also fine serratures on the lower margins of the preoperculum and suboperculum, near their junction. Instead of a single ridge proceeding from the upper anterior angle of the operculum, and terminating backward in a single spine, there are usually several ridges radiating thence, and often terminating in the opposite margin in very acute spines. Humeral bones armed posteriorly with several spines. Vent midway between the ventrals and the caudal fin. The anal fin commences under the fourth ray of the second dorsal. The first dorsal begins in a vertical line, passing through the base of the ventrals. Caudal forked.

General color grayish or brownish yellow, or orange, lightest beneath. First dorsal sprinkled with roundish black spots of the size of a small pea, usually arranged in two or three rows, nearly parallel to the line of the back, but without the black patch on the posterior part, which forms a conspicuous mark in the *L. americana*. Second dorsal, and the caudal, barred with black, or brown. Usual length, 18 inches.

Rays, B. 7, D. 13–14, P. 13, V. 15, A. 12, C. 17 $\frac{5}{8}$.

HISTORY.—When the Natural, Civil and Statistical History of Vermont was published, I was well satisfied that the species here described was distinct from the *L. americana*, but was not so clear whether it was a species already described, or not. The difference between this species and the *L. americana* is so obvious, that they are instantly distinguished, even when there is no difference in size; but while the latter

THE DARTER.

species often exceeds two feet in length, and weighs five or six pounds, the *L. canadensis* seldom, if ever, exceeds 14 inches in length, or half a pound in weight. It is much less common in Lake Champlain than the *L. americana*, but is frequently taken in company with it. It usually swims very near the bottom of the water, and hence it has received the name of *Ground Pike*, (Pike-Perch). As an article of food, this species is held in the same high esteem, as the Common Pike-Perch.

GENUS BOLEOSOMA.—*De Kay*.

Generic Characters.—Two dorsal fins. Opercle scaly, with a single spine. Preopercle smooth on the margin. Six branchial rays. Nape depressed, contracted.



THE DARTER.

Boleosoma tassellatum.—DEKAY.

DESCRIPTION.—A small fish, with a row of quadrated black spots, about seven in number, along the dorsal ridge, occupying about one-half of the space. A row of lozenge-shaped black spots, a little smaller than those on the back and about the same in number, along the lateral line, on each side of the body. General color of the remaining parts brownish yellow, approaching to white on the belly. Eyes moveable in their sockets; pupils black, surrounded by a golden line, which fades outward into a gray iris. Fins yellowish white, with faint brownish bars on the dorsals and caudal fin. Body cylindrical, covered with rough scales. Head rather small; eyes large and projecting; nape depressed.

HISTORY.—The habits of this fish are quite peculiar. It moves not from place to place by an even labored motion, like other fishes, but proceeds by sudden leaps, or darts, impelling itself forward by its tail and pectoral fins, which it moves as a bird does its wings. It remains suspended in the water no longer than it keeps its pectoral fins in rapid motion. When the motion of its fins ceases, the fish sinks, at once, to the bottom, showing that its specific gravity is greater than water, owing, doubtless, to its want of a swimming bladder. When it reaches the bottom, it alights upon its stiff ventral fins, upon which it stands on the bottom, balanced, with its head elevated, as a bird stands on its feet. I kept several specimens of this fish alive, in a vessel of water, for some time, for the

LITTLE STAR-GAZER.

purpose of watching their motions and learning their habits. They were very uneasy, and seemed extremely anxious to escape from their confinement. Aided by their caudal and pectoral fins, in giving them an impulse upwards, and by their ventrals in climbing and adhering, they would often raise themselves up the perpendicular side of the vessel, entirely above the surface of the water, excepting only the caudal fin. Another peculiarity of this fish, is its power of bending its neck and moving its head without moving the body, in which respect it equals many of the reptiles. This fish is entitled to the name of *Darter*, both from its sudden motion, and from its having the general form of a dart.

THE LITTLE STAR-GAZER.

Cottus gobioides.—GIBARD.

DESCRIPTION.—*Color*, blackish on the back, mottled with light yellow; abdomen white; lower parts of the sides and under parts posterior to the vent, yellow—all the under parts finely sprinkled with black specs. *Fins*; first dorsal blackish, edged with red; all the others barred with brown and yellow, except the ventrals, which are white, close together, and a little behind the pectorals. *Teeth* sharp and fine, like velvet pile, on both jaws. *Tongue* large and fleshy, with a patch of teeth. *Head* large, broad, and a little flattened, with the eyes, which are large, on the upper side and near together. A sharp, stout spine on the preoperculum. *Lips* rather fleshy, and the upper one a little protractile.—*Body* thick forward, tapering very fast towards the tail. Lateral line nearest the back, consisting of a furrow with the edges a little raised. Caudal fin rather large, and nearly even. Pectorals very large, and rounded. Ventrals long and narrow. Vent anterior to the middle. Skin thickly covered with mucus. No scales.

Total length, 4 inches; to the commencement of the first dorsal fin, 1.2; to the vent, 1.7. Width of the head, 0.95.

Fin Rays, B. 6, D. 7—17, P. 14, A. 12, C. 15.

HISTORY.—For the specimen here described, I was indebted to the kindness of Mr. R. Colberth. He caught it, while fishing for trout, in a branch of the river Lamoille, in Johnson. This fish usually lies still at the bottom, or concealed under the stones in the streams, and seldom moves, except when disturbed, and then its motions are sluggish and labored. It is called, in some places, the Slow Fish.

It probably derived the name of Star-Gazer, from the favorable position of its

SMALL-SCALED DACE.

MASQUALLONGE.

eyes for looking upwards, they being placed very near the top of the head. It seldom exceeds 4 inches in length.

Mr. Girard ascertained our *Cottus* to be an undescribed species from the identical specimen, which I have described here, and he gave it the name of *C. gobioides*, from its strong resemblance to the *Cottus gobio* of Europe. His description of the fish, accompanied by a beautifully engraved figure of it, is contained in his valuable Monograph of the Cottus Family of Fishes, published in the second volume of Smithsonian Contributions to Knowledge.

SMALL-SCALED DACE.

Leuciscus atromaculatus.—MITCH.

DESCRIPTION.—Color of the head and back dark olive-brown; sides lighter, often with bronzy reflections, and passing into a whitish flesh-color on the belly. Dorsal, caudal and outer margins of the pectoral fins, brownish; inner margins of the pectorals, the ventrals and the anal fin, dull orange. Eyes rather small; pupil black, surrounded by a fine golden line; iris brown. Scales small and crowded, as far backward as the ventrals. Lateral line begins at the top of the gill opening, bends rapidly downward over 11 scales, and then runs a straight course to the tail, passing over, in the whole, 60 scales. Tail lunated. Pectoral and ventral fins rounded. A squarish distinct black spot on the anterior part of the base of the dorsal fin.

Length of the specimen described, 6.5 inches; to the pectoral fins, 1.5; dorsal 3; vent, 3.75; anal, 3.9; to base of caudal, 5.5; width between the eyes, 0.6; head, 0.8.

Rays, D. 8, P. 16, V. 8, A. 8, C. 19.

HISTORY.—This is one of the most common fishes of this genus in the western part of Vermont. It abounds almost everywhere, both in the rivers and small streams. Its insipidity and small size prevent its being sought as an article of food; but, as it takes the hook with great readiness, it affords the boys an opportunity to indulge in the cruel sport of catching them for mere amusement. They are also caught to be used as bait in taking larger fishes.



MASQUALLONGE.

Esox nobilior.—THOMPSON.

Esox estor, Richardson Fauna Boreali, Part III, -127.
Esox estor, Herbert's Frank Forester's Fish and Fishing.

DESCRIPTION.—Back nearly black; sides bluish gray, mostly covered with irregular roundish dark-brown spots, usually about an inch in diameter, and often confluent, with a few meandering yellowish lines. Belly grayish white, with ruddy tinges. Fins dark brown; pectorals ruddy. Eyes moderately large; pupils black, surrounded by a bright yellow ring, which fades outward over the irides into grayish orange. Length of the specimen before me, 18 inches, from the tip of the under jaw, which is longest, to the extremity of the tail; to the anterior nostril, 4 inches; to the orbit, 5; to the nape, or beginning of the scales, 8; to posterior edge of the preoperculum, 8.5; do. of the operculum, 10.5; the beginning of ventral fins, 24.5; do. dorsal, 31.5; do. anal, 32.5; to the centre of the base of the caudal, 42.75; width between the orbits, 3. Fins: dorsal, length, 5; height 4,—pectorals, length, 1.7; height 5,—ventrals, length, 1.5; height, 4,—anal, length, 4; height 4 5,—caudal, 4 across the base; longest rays, 6.25. Lower part of the cheek, in front of the preoperculum, naked. Face nearly flat between the orbits.

Rays, D. 218, P. 16, V. 112, A. 216, C. 19 $\frac{1}{2}$.

HISTORY.—This fish has, till lately, been confounded with the *Esox estor*, or Common Pike, or Lake Pickerel. When my description of the *E. estor* was published, in 1842, I doubted the existence of this species in our lake, but since that time my mind has changed on the subject. In May, 1847, I received from my friend, the Hon. A. G. Whittemore,* of Milton, a fish caught near the mouth of the river Lamoille, which the fishermen called Masquallonge. It was 26 inches long, and weighed about 6 pounds. Upon examining it, I was fully satisfied that it was of a species distinct from *E. estor*, and, as I could find no description of it under any other name, I made out a description and gave it the name of *Esox nobilior*.

In April, 1848, I received another specimen from the same source, which weighed 19 lbs., and was 41 $\frac{1}{2}$ inches long. In May, 1849, two specimens were brought along, both caught near the mouth of the Lamoille, one of which weighed 40, and the other 27 pounds. I purchased the latter, and from it the preceding description is chiefly drawn.

Believing this species to attain a larger size, and to be a more excellent fish for the table, than any other species of the Pike

* Since the above was written, I have received intelligence of the death of my esteemed friend, Albert G. Whittemore, Esq. He was accidentally killed at Zanesville, Ohio, on the 10th of November, 1852, aged 55 years; where he was engaged as contractor on the rail road from that place to Wheeling. He was a gentleman of intelligence and enterprise, and of many estimable qualities as a man and a citizen.

MASQUALLONGE,

TROUT-PERCH.

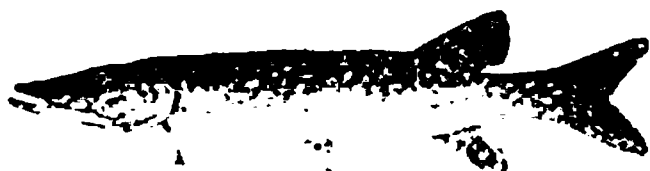
family, found in the United States, I have given it the specific name of *nobilior*. It is a fish, which is eagerly sought, and commands the highest price in market, but it is rare in Lake Champlain, compared with *E. estor*, or Common Pike. Very good figures of both of these species are given in Frank Forester's Fish and Fishing, but both under wrong names; the *E. nobilior* being figured under the name of *E. estor*, and the *E. estor* under that of *E. lucioides*.

The vulgar name, MASQUALLONGE, appears to have been given by the early French settlers of Canada to the Pikes and Pickerels generally, it being a term, or phrase, descriptive of the whole family, *Masque*, signifying face or visage, and *allonge*, lengthened,—they all having lengthened, or elongated heads. In modern times this name, Masquallonge, has been confined, by the fishermen, to the species here described, while the other species bear the vulgar name of Pike, or Pickerel. The methods of spelling this Canadian-French name, have been almost as numerous as the authors, who have used it, as may be seen by the following list:

Maskallonge,	Le Sueur.
Masquinongy,	Dr. Mitchell,
Maskinonge,	Dr. Richardson.
Muskallonge,	Dr. Kirtland,
Muskellunge,	Dr. DeKay.

The oldest forms of this name, it will be seen, approach nearest, both in spelling and pronunciation, to the phrase *Masque allonge*, which we have supposed to be its origin, and, therefore, afford presumptive proof of the correctness of our supposition.

This fish may usually be distinguished from the Common Pike by its dark circular markings, and its more robust proportions. Its head is proportionally shorter, the face flatter and less grooved, and the width across the eyes and upper jaw greater than in the *estor*. But, perhaps, the mark by which it may be most readily distinguished is on the cheek, the lower half of the cheek in the *E. nobilior*, in front of the preoperculum, being naked, or without scales, while in the *E. estor* the whole cheek is covered with scales. The difference in the general aspect of the two species may be seen by comparing the figure of the *E. estor* below, with the *E. nobilior* at the head of this article.



Esox estor.—LÉSCHE.

The specimen here described was a female, with her abdomen filled with eggs, contain-

ed in two ovaries, which extended nearly the whole length of the cavity. This fish abounds much more in the streams and smaller lakes in Canada than in Lake Champlain.

GENUS SALMOPERCA.—Thompson.

Generic Characters.—Two dorsal fins, the first supported by flexible rays, and the second adipose, as in the trouts. Opercles smooth. A band of fine teeth in each jaw. Scales with serrated edges, as in the perches.



TROUT-PERCH.

Salmoperca pellucida.—THOMPSON.

Percopsis guttatus, Agassiz Lake Superior, p. 284, and Plate I., fig. 1 and 2.

DESCRIPTION.—General color, light brownish yellow, with longitudinal rows of brown spots, about one-tenth of an inch in diameter, usually one row along the dorsal line, and two rows on each side between this and the lateral line. A broad satin stripe embraces the lateral line. Belly white. Fins and flesh translucent—the vertebral column, the contents of the abdomen, and portions of the head, only appearing opaque, when held towards the light. Fins all large, in proportion to the size of the fish. The rays of the pectorals reach backward half of their length beyond the ventrals, which are attached near the middle of the abdomen, and under a point a little anterior to the first dorsal, and reach backward to the vent. The anal fin has its first ray short and spinous. Caudal fin forked. Nostrils and eyes large; irides yellow. A depression on the head, between the orbits, divided longitudinally by a long ridge. Scales rather large and rough, having finely serrated edges. Length, from 3 to 5 inches. The following are the measurements of one out of three living specimens before me, when the above description was made: Total length, 3.9 inches; to the pectoral fin, 1; to ventral, 1.45; first dorsal, 1.5; anal, 2.1; adipose, 2.6; central base of caudal, 3.2. Fin rays, B. 6, D. 210—0, P. 13, V. 8, A. 17, C. 18⁴.

HISTORY.—The first knowledge I had of this fish was in the summer of 1841, when I found a specimen of it, 5 inches long, which was dead, and had been drifted up by the waves on the lake shore, in Burlington. On examining it, I found it to possess the adipose and abdominal fins of the trouts,

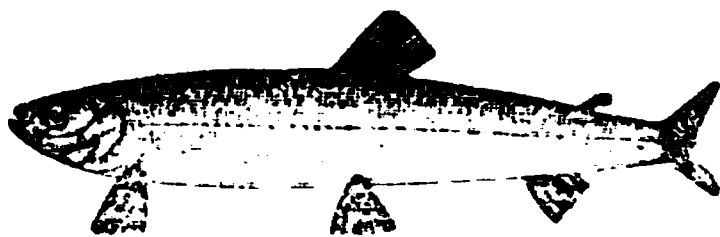
but, in its teeth, gill covers and particularly in its hard serrated scales, to bear considerable resemblance to the perch family. After searching all the books within my reach, without finding it described, I concluded that it might be new, both in genus and species, and accordingly, in allusion to the above mentioned properties, I described it in my journal under the provisional generic name of *SALMOPERCA*. A notice of this fish was omitted in my History of Vermont, published in 1842, because I had then only one specimen, and, upon that one, with my little experience, I did not think it prudent to found a new genus and species. When Prof. Agassiz was at Burlington, in 1847, I submitted the above mentioned specimen to his inspection, having at that time obtained no others. At first sight, he thought it might be a young fish of the salmon family, but, upon further examination, he said it was not a salmon, nor any other fish with which he was acquainted.

During the summer of 1847, I found three other specimens of this fish, dead, on the lake shore. One of these I took with me to Boston, in September, to the meeting of the Association of American Geologists and Naturalists, and put it into the hands of my friend D. H. Storer, M. D., with a request that he would ascertain what it was, and let me know.

In May, 1849, I obtained from Winooski river a number of living specimens, which I kept alive for some time; and, observing the great translucency of the living fish, when held up towards the light, I gave it the specific name of *pellucida*, having previously called it, in my journal, *eoceta*, from its wing-like pectoral fins.

About this time I noticed, in the proceedings of the Boston Society of Natural History, that Prof. Agassiz had laid before the Society an account of a new genus of fishes discovered by him in Lake Superior, which he proposed to call *PERCOPSIS*. Suspecting, from the brief description given of it, that it was identical with my *SALMOPERCA*, I wrote to Dr. Storer and inquired of him, if the specimens from Lake Superior, presented to the Society by Prof. Agassiz, were like the one I put into his hands in 1847. He wrote me that he could not say—that the specimen went out of his hands soon after he received it, and he had not seen it since.

In Prof. Agassiz Lake Superior, page 248, I find an account of his genus *PERCOPSIS*, and his species *P. guttatus*, and I have no doubt that it is identical with my *Salmoperca pellucida*. Still, I have thought it best to let it remain, in this Appendix, under the name I had given.



HERRING SALMON.

Coregonus clupeiformis.—MITCH.

Coregonus artedi.—LESCEUR.

Argyrosomus clupeiformis.—AGASSIZ Lake Superior, p. 339.

DESCRIPTION.—Color of the back bluish brown; sides lighter, with silvery reflections; belly white. Gill covers and cheeks, with silvery and cupreous reflections. Head small, pointed and somewhat flattened above; under jaw longest; mouth small, without teeth; eyes large, round—irides silvery yellow. Scales large and circular. Lateral line distinct, nearly straight, and passes over 72 scales; 13 rows of scales between the first dorsal and the ventral fin—a long slender bract at the base of the ventrals. Pectoral fins long and pointed; ventrals under the anterior part of the dorsal, and triangular; first dorsal nearly midway between the point of the lower jaw and the extremity of the caudal fin; second dorsal adipose and over the posterior part of the anal, and triangular; caudal forked.

Length, total, 14 inches; to the posterior edge of the operculum, 2.4; to the beginning of the dorsal fin, 6; to the ventrals, 6.2; to the vent, 9; to the anal, 9.3; to the adipose, 10.2; to the central base of the caudal, 12; greatest depth in front of the first dorsal, 2.5; thickness, 1.4. Length of the longest fin rays: first dorsal, 1.6; Pectoral, 1.5; Ventral, 1.4; Anal, 1, and Caudal, 2.

Rays, B. 8, D. 10,—0, P. 4, V. 11, A. 11, C. 18⁶.

HISTORY.—This fish is only occasionally met with in Lake Champlain, but they sometimes appear here in myriads. In the spring of 1847, they were, for a short time, taken at Burlington, in very large numbers; as many as 200 being taken at one haul of the seine. In some years none at all are taken here. The specimen from which the preceding description is made was taken in 1848, and I learned of only two others being taken that season. It resembles, somewhat, the Lake Shad, *C. albus*, but is a rounder fish, having much less depth in proportion to its length. It is much esteemed as an article of food. It is common in Lake Ontario and Lake Erie, and is called in many places the Shad Salmon.

THE BOWFIN.

BOTANY OF VERMONT.

GENUS AMIA.—*Linnaeus*.

Generic Characters.—Small paved teeth behind the conical ones. Head flattened, naked, with conspicuous sutures. Twelve flat gill-rays. A large buckler between the branches of the lower jaw. Dorsal long. Anal short. Air-bladder cellular, like the lungs of reptiles.



THE BOWFIN.

Amia ocellicauda.—RICHARDSON.

Amia occidentalis.—DEKAY.

DESCRIPTION.—General color above, brown, waved with dull bronzy yellow, approaching to white on the belly, and having the sides sprinkled with yellowish white spots. Pectoral, ventral and anal fins, brownish; dorsal and caudal with alternate bars of brown and brownish white. A large and conspicuous black spot near the upper part of the tail, at the base of the 4th, 5th, 6th and 7th rays of the caudal fin. Head without scales, covered with scabrous bony plates; opercles bony, with membranous edges. Gill-rays flat. Cartilaginous buckler between the branches of the lower jaw. Two short cirri on the upper lip. Eyes moderate, deeply sunken. Jaws broad, rounded and even. A row of sharp conical teeth in each jaw, paved behind with short

blunt teeth. Scales large and thin. Lateral line distinct, nearly straight, nearest the back, on the anterior part of the body, crossing 70 scales, which are smaller than those adjacent. Attachment of the caudal fin oblique—caudal rounded. Total length of the specimen before me, 19.2 inches; from the snout to the upper side of the gill-opening, 4; to the beginning of the dorsal, 6.8; to the ventrals, 9; to the anal, 11.5; to the lower edge of the caudal, 15; depth behind the pectorals, 3.6. Width of the head, 3; back of the pectorals, 2.6. Distance between the eyes, and from the orbits to the end of the snout, 1.3 each; between the cirri, 0.6. Length of the dorsal fin, 8.7; height, 1.2,—commences midway between the pectorals and ventrals, and reaches almost to the tail.

Fin Rays, D. 48, P. 17, V. 7, A. 28, C. 21.

HISTORY.—This fish abounds upon the muddy bottoms and the marshy coves of the southern part of Lake Champlain. It is very plentiful in the vicinity of Whitehall, and also about the mouth of Otter Creek. From its partiality to muddy bottoms, it has acquired, in many places, the name of Mud Fish. From its resemblance in form to the Ling, it is called in some places the *Scaled Ling*. But its more common appellation in Vermont, is that of *Bowfin*. It attains to considerable size, frequently exceeding two feet in length, and weighing 10 or 12 pounds; but its flesh is soft and ill flavored, very little esteemed as an article of food.

BOTANY OF VERMONT.

Additional to Part I., Chapter VII.

In the first edition of my Gazetteer of Vermont, published in 1824, I gave a simple catalogue of the plants then known to be indigenous, in this state. The materials for that catalogue were derived, principally, from a list of plants growing in the vicinity of Middlebury, prepared by Dr. Edward James, and published, in 1821, in Prof. Frederick Hall's statistical account of Middlebury. The additions to this list were mostly furnished by Dr. William Paddock, Prof. of Botany in the University of Vermont. At that time, very little attention had been given to the scientific botany of the state, and the whole number of plants contained in my catalogue was only 569.

Between 1824 and the publication of my general history of Vermont, in 1842, our state was explored by several eminent botanists from abroad, and by a number of enthusiastic disciples of Linnaeus, raised up

in our midst, by whose united labors our list of known indigenous plants was greatly enlarged. While engaged in collecting together these scattered materials, for the purpose of making my Catalogue as complete as possible, in the work I was preparing for publication, I was so fortunate as to become acquainted with the late Wm. Oakes, Esq., of Ipswich, Mass. He was at that time engaged in investigating the botany of the western part of Vermont, and he very generously undertook, for me, the systematic arrangement of a complete Catalogue of Vermont plants. I, therefore, put into his hands my former catalogue and all the additional materials, I had accumulated, and the full and beautifully arranged Catalogue in Part I, Chapter VII, is the result of his labor. That Catalogue contains 929 species of Vermont plants, and is an honorable memorial of its

Author, both of his kindness as a friend, and of his zeal and accuracy as a botanist*.

Since the publication of the Catalogue above mentioned, the number of known

Vermont plants has been considerably increased, and we have doubtless many more species to reward the labors of botanists. By the kindness of several friends, I am enabled to add to the previous list 105 species, making in the whole 1034.

For the arrangement of these additional species, and for the identification of a large number of them, I am indebted to the kindness of my friend, Prof. Joseph Torrey, D. D., of the University of Vermont.

* It is my painful duty here to record the death of my esteemed friend, William Oakes, Esq. He was drowned on the 31st of July, 1848, while passing from Boston to East Boston, under circumstances which left it doubtful, whether by accident, or in a temporary fit of insanity, to which he was subject. He was 49 years of age.

CATALOGUE OF VERMONT PLANTS.

Continued from page 177, Part I.

CLASS I. EXOGENOUS OR DICOTYLEDONOUS PLANTS.

ORDER RANUNCULACEÆ.

Clematis, Linn.

viorna, Wildn. Found at Castleton, by Mrs. J. Carr. A very rare species. June, July.

Anemone, Haller.

aconytifolia, Mx. Castleton. Mrs. J. C.

Ranunculus, L.

fascicularis, Muhl. Low grounds. Burlington, T*. Brattleborough, C. C. Frost.

ORDER MAGNOLIACEÆ.

Liriodendron, L.

tulipifera, L. A tree not rare in the southern part of this state, fifty years ago. Some large specimens are still left in Bennington county, valley of the Hoosic river. Mrs. J. C.

ORDER CRUCIFERÆ.

Nasturtium, R. Br.

hispidum, D. C. Low grounds, Burlington. Also found in Brattleborough, C. C. F.

Arabis, L.

lyrata, L. Mountain-garden. Willoughby lake. C. C. F. May.

canadensis, L. Rocks below Winooski Falls; Colchester. T. June.

Cardamine, L.

rotundifolia, Mx. In Vermont, locality not specified. Dr. Robbins.

Virginica, Mx. Hill-sides, Vt. A. Wood. June.

Sisymbrium, All.

thaliana, Gay. Rocks and sandy fields, Vermont. A. Wood. May.

Draba, L.

verna, L. Willoughby lake. A. W. May.

Erysimum, L.

cheiranthoides, L. Brattleborough, C. C. F.

Isatis, L.

tinctoria. Banks and islands of Winooski river; Burlington, T. Probably introduced.

ORDER VIOLACEÆ.

Viola, L.

Selkirkii, Goldie. Rich cedar swamps. Grand Isle. T.

pedata, L. Brattleborough. C. C. F. April, May.

ORDER HYPERICACEÆ.

Hypericum, L.

sarothra, Mx. Brattleborough, C. C. F. July, August.

* The authority to which T. refers in this catalogue, is Prof. Joseph Torrey, of the University of Vermont.

ORDER CARYOPHYLLACEÆ.

- Saponaria, *L.*
officinalis, *L.* Brattleborough, *F.* Banks of Castleton river. *Mrs. J. C.*
 Silene, *L.*
inflata, *Smith.* Brattleborough, *F.* Castleton, *Mrs. J. C.* June.
 Sagina, *L.*
procumbens, *L.* Brattleborough, *F.* June.

ORDER PORTULACEÆ.

- Claytonia, *L.*
Virginica, *L.* Intervale lands in Colchester. Quite distinct from the species
Caroliniana, *Mx.*, *T.* April, May.

ORDER ACERACEÆ.

- Negundo, *Moench.*
aceroides, *Moench.* Abundant in some localities on the banks of Winooski river,
 Burlington and Colchester, *T.* April.

ORDER RHAMNACEÆ.

- Rhamnus, *L.*
catharticus, *L.* Bethel, *R. Green.* July.

ORDER LEGUMINOSÆ.

- Astragalus, *L.*
Canadensis, *L.* Burlington, near Red Rocks, *R. Benedict.* July.
 Hedysarum, *L.*
boreale, *Nutt.* Willoughby lake. *A. Wood.* June, July.

ORDER ROSACEÆ.

- Sanguisorba, *L.*
Canadensis, *L.* Brattleborough, *C. C. F.* July.
 Rubus, *Tourn.*
Idæus. Cambridge, *Dr. Robbins.* June.

ORDER ONAGRACEÆ.

- Epilobium, *L.*
molle, *Torr.* Intervals, Burlington, *T.* June.
 Oenothera, *L.*
fruticosa, *L.* Willoughby lake, *C. C. F.* August.

ORDER MELASTOMACEÆ.

- Rhexia, *L.*
Virginica, *L.* Brattleborough, *C. C. F.*

ORDER SAXIFRAGACEÆ.

- Saxifraga, *L.*
oppositifolia. Willoughby lake, *A. Wood.*
aizoides. Willoughby lake, “

ORDER UMBELLIFERÆ.

- Sium, *L.*
lineare, *Mx.* Burlington, *T.* June and July.

ORDER COMPOSITÆ.

- Diplopappus, *Cass.*
linarifolius, *Hook.* Brattleborough, *C. C. F.* September.
 Sericocarpus, *Nees.*
solidagineus, *Nees.* Brattleborough, “ July.
 Aster, *L.*
radula, *Ait.* Brattleborough, “ July.
elodes, *T. & G.* Brattleborough, “ July.
cyaneus, (*var.*) Brattleborough, “ July.
amethystinus, *Nutt.* Brattleborough, “ August.
sagittifolius, *Ell.* Brattleborough, “ September.

Solidago, L.

- rigida*, L. Burlington, T. August and September.
stricta, Ait. Burlington, T. August and September.
serotina, Willd. Burlington, T. August and September.
patula, Muhl. Burlington, T. August and September.
thyrsoides, Meyer. Willoughby lake, A. W. Mansfield mountain, W.
Muhlenbergii, T. & G. Brattleborough, C. C. F. August.
corymbosus. Willoughby lake, C. C. F. August.

Artemisia, L.

- Canadensis*, Michx. Willoughby lake, A. W.

Rudbeckia, L.

- hirta*, L. Brattleborough, C. C. F. July.

Helianthus, L.

- frondosus*, (var.) Brattleborough, C. C. F. July.
trachelifolius, Willd. Brattleborough, C. C. F. August.

Hieracium, L.

- Gronovii*, Tourn. Colchester, T. Brattleborough, C. C. F. July.
scabrum, Michx. Brattleborough, C. C. F. August.

Cirsium, Tourn.

- horridulum*, Michx. Brattleborough, C. C. F. July.

Cichorium, Tourn.

- Intybus*, L. Burlington, in the lanes, Mrs. A. P. Judd. August.

ORDER LOBELIACEÆ.

Lobelia, L.

- Dortmanna*, L. Willoughby lake, A. W. July.

ORDER ERICACEÆ.

Andromeda, L.

- ligustrina*, Muhl. Brattleborough, C. C. F. June.

ORDER AQUIFORDELELIACEÆ.

Prinos, L.

- laevigata*, L. Mouth of the Winooski, Burlington, T. June.

ORDER ASCLEPIADACEÆ.

Asclepias, L.

- purpurascens*, L. Brattleborough, C. C. F. June.
variegata, L. Brattleborough, " July.
verticillata, L. Brattleborough, " July.

ORDER BORAGINACEÆ.

Myosotis, L.

- stricta*, Link. Brattleborough, C. C. F. June.

Symphytum, L.

- officinale*, L. Pownal, T. Introduced. July.

ORDER LABIATÆ.

Pycnanthemum, Michx.

- linifolium*, Pursh. Brattleborough, C. C. F. July.
aristatum, Michx. Brattleborough, " August.

Trichostema, L.

- dichotoma*, L. Brattleborough, " August.

ORDER SCROPHULARIACEÆ.

Verbascum, L.

- blattaria*, L. Burlington, T. Brattleborough, C. C. F. July.

Olysanthus, Rafinesque.

- gratioloides*, Benth. Brattleborough, C. C. F. July.

Pentstemon, L'Her.

- laevigatum*, Soland. Burlington, Red Rocks, T. August.

ORDER LENTIBULACEÆ.

Utricularia, L.

- inflata*, Walt. Brattleborough, C. C. F. August.

ORDER PRIMULACEÆ.

Primula, L.

- Mistassinica*, Michx. Willoughby lake, A. Wood.

ORDER PLANTAGINÆ.

Plantago, *L.**lanceolata*, *L.* Burlington, *T.* July.*Virginica*, *L.* Brattleborough, *C. C. F.* July.

ORDER POLYGONACEÆ.

Polygonum, *L.**erectum*, *L.* Burlington, *T.* Brattleborough, *C. C. F.* July.*punctatum*, *Ell.* Brattleborough, *C. C. F.* July.Rumex, *L.**sanguineus*, *L.* Brattleborough, *C. C. F.* July.*aquaticus*, *L.* Brattleborough, " July.

SUB-ORDER MYRICEÆ.

Myrica, *L.**gale*, *L.* Wells, border of the pond, *T.* July.

CLASS II. GYMNOSPERMS.

ORDER CONIFERÆ.

Cupressus, *Tourn.**thyoides*, *L.* Willoughby lake, *C. C. F.* May.Juniperus, *L.**Sabinus*, *L.* West Rutland, *Mrs. J. C.*

CLASS III. ENDOGENS OR MONOCOTYLEDONS.

ORDER AMARYLLIDACEÆ.

Hypoxis, *L.**erecta*, *L.* Brattleborough, *C. C. F.* June.

ORDER ALISMACEÆ.

Sagittaria, *L.**lanceifolia*, (*var.*) Burlington, *T.* Brattleborough, *C. C. F.* July.*natans*? Brattleborough, *C. C. F.* July.

ORDER XYRIDACEÆ.

Xyris, *L.**Caroliniana*, *Walt.* Brattleborough, *C. C. F.* August.

ORDER RESTIACEÆ.

Eriocaulon, *L.**decangulare*, *Michx.* Willoughby lake, *A. W.*

ORDER PODOSTEMACEÆ.

Podostemon, *Michx.**ceratophyllum*, *Michx.* Brattleborough, *C. C. F.* July.

ORDER FLUVIALES.

Potamogeton, *L.**perlongus*, *Wolff.* Willoughby lake, *A. W.* July.*oblongus*. Brattleborough, *C. C. F.* July.*pulcher*. Brattleborough, *C. C. F.* July.*hybridus*, *Michx.* Brattleborough, *C. C. F.* July.*spiralis*. Brattleborough, *C. C. F.* July.

ORDER CYPERACEÆ.

Rhynchospora, *Vahl.**alba*, *Vahl.* Burlington, *T.* August.

Carex, Michx.

- lanuginosa*, Michx. Burlington, T. July and August.
folliculata, L. Burlington, T. July and August.
angustata, (Boot.) Burlington, T. July and August.
filiformis, Linn. Burlington, T. July and August.
striata, Michx. Burlington, T. July and August.
dioica, L. Burlington, T. July and August.
scirpoidea, Schk. Willoughby lake. July and August.

ORDER GRAMINEÆ.

Koeleria, Pers.

- Pennsylvanica*, D. C. Burlington, T. July.

Oryzopsis, Michx.

- melanocarpa*, Muhl. Willoughby lake.

Aira, L.

- atropurpurea*, Wahl. Mansfield mountain, T. August.

Lolium, L.

- perenne*, L. Willoughby lake, C. C. F.

Muhlenbergia, Schreb.

- sylvatica*, T. & G. Willoughby lake, C. C. F.

CLASS IV. ACROGENS.

ORDER FILICES.

Isoetes, L.

- lacustris*, L. Brattleboro, C. C. F.

Woodsia, R. Brown.

- glabella*. Willoughby lake.

GEOLOGY OF VERMONT.

Geological Survey.

In my Preface to the Natural, Civil and Statistical History of Vermont, it was stated that Chapter VIII, Part I., remained to be written, after a Geological Survey of the state should be effected. Little did I then think that ten years would be suffered to pass away, and so desirable a work remain unperformed. But such is the fact; and I am, therefore, yet under no obligation to redeem my pledge, to write that chapter. But since, within those ten years, a Geological Survey of the state was *begun*, and since, through that beginning, and other means, important geological facts have been brought to light, I shall here give a brief history of the labors, which have been performed, and a brief sketch of the knowledge of our geology which has been acquired.

The first state Geological Survey, prosecuted under legislative authority, was, I think, authorized by North Carolina, in 1828. In 1824, the legislature of South Carolina authorized a geological survey; and in 1830 provision was made for a geological survey of Massachusetts, under the

authority of that state. The execution of the survey of Massachusetts was committed to Professor, (now President), Hitchcock, of Amherst College, and was prosecuted with so much ability and success, that most of the other states followed the example, and authorized surveys.

In the execution of these surveys, and in the publication of the results, the state of New York has, by far, outdone any of the other states. The plan of the New York survey embraced, not only the Geology and Mineralogy of the state, but also the Botany and Zoology; and ample provision was made for carrying out that plan. The corps of surveyors embraced four distinguished geologists, one mineralogist, one palæontologist, one botanist and one zoologist, with their respective assistants. Arrangements were made for commencing the work in 1836, and, after five years of incessant labor, in 1842, several volumes of the Final Reports were in readiness for publication, which, with other volumes afterwards prepared, have since been published. These reports are published in large quarto form, on excellent paper, and fully illus-

GEOLOGY OF VERMONT.

GEOLOGICAL SURVEY.

trated with excellent engravings. Eighteen volumes have been published, five of which are devoted to zoology, four to geology, four to agriculture, one to mineralogy, two to organic remains, and two to botany.

The subject of a Geological Survey of Vermont was first brought before the legislature of the state in 1836*. In 1837 the subject was referred to the committee on education, in behalf of which, Professor Eaton submitted to the Senate a very able Report, accompanied by several important documents. The report closed by recommending the passage of a resolution, ordering the report and documents to be printed and circulated among the people of the state, and by expressing the belief that, upon due consideration, the popular voice would be in favor of providing for the survey at the next session of the legislature. In 1838, the subject was again taken up, discussed and dismissed, without any provision being made for commencing the survey; and nearly the same process, with the same result, was repeated at each succeeding session of the legislature down to the year 1844, when a bill, authorizing a Geological Survey of the state, was finally passed, in the Senate, by 20 yeas to 7 nays, and in the House, by 96 yeas to 92 nays, and received the Governor's approval.

This act authorized and directed the Governor to appoint a competent State Geologist, who should have power, with the Governor's approbation, to appoint the necessary assistants, fix the amount of their compensation, and direct their labors. It made it "the duty of the State Geologist, as soon as practicable, to commence and prosecute a geological and mineralogical survey of the state, embracing therein a full and scientific examination and description of its rocks, soils, metals and minerals," and report to the Governor, annually, on the 1st day of October, the progress of the work. For the purpose of carrying the provisions of this act into effect, the sum of \$2,000 annually, for the term of three years, was appropriated.

His Excellency, William Slade, Esq., being Governor, upon him devolved the appointment of the State Geologist, and the arrangements, on the part of the state, for carrying the contemplated survey into effect. After some time spent in deliberation and inquiry, he finally commissioned Charles B. Adams, at that time Professor of Chemistry and Natural History in Middlebury College, the State Geologist, who was to enter upon his duties on the 1st day of March, 1845†.

In arranging the details of the survey, it was provided that, so far as should be found practicable, eight suites of specimens of all the rocks and minerals should be collected, trimmed and ticketed. These specimens, when the material admitted, were to be three inches square, and from one to two inches thick. The destination of these suites of specimens were as follows:—one, (and the best, where there was a choice,) for a state collection at Montpelier; one for the University of Vermont; one for Middlebury College; one for Norwich University; one for each of the Medical Colleges, at Castleton and Woodstock; one for the Troy Conference Academy, at Poultney, and one to be the property of the State Geologist.

With the approbation of the Governor, the State Geologist appointed the Rev. S. R. Hall and Z. Thompson, general assistants in the field labor, and Dr. S. P. Lathrop, assistant in the depot of specimens, and in occasional field services. The field labors were commenced as soon as the advancement of the season would permit, which was early in May, and were prosecuted during the summer with unremitting diligence. The labors of the general assistants were confined to the northern half of the state; and, during their four months' services, they together, or separately, visited and explored, more or less thoroughly, about 110 townships. The State Geologist, with Dr. Lathrop and other occasional assistants, labored, for the most part, in the southern half of the state. During the season, about 6,000 specimens were collected and forwarded to the depot, in Middlebury. These were mostly trimmed, ticketed and catalogued, in the course of the following winter.

During the years 1846 and 1847, the business of the Survey was diligently prosecuted by the State Geologist, and the assistants were employed, for several months in each summer, in field labors. At each session of the legislature reports were made to the Governor, of the progress of the work; and these annual reports were published and circulated among the people.

friend, Prof. Charles B. Adams. He died of fever, on the 19th of January, 1853, on the island of St. Thomas, W. I., whither he had gone for the double object of improving his health and furthering himself in his favorite pursuits of Natural History. In the death of Prof. Adams, the scientific world has lost a most indefatigable and successful laborer. During the last ten years, few individuals have done more than he did, for the advancement of the natural sciences. By his contributions to Conchology, and his minute investigation of the geographical distribution of mollusks, he has erected to himself an honorable monument; and, although removed by a mysterious Providence, in the prime of life, and in the midst of his usefulness, his name will long be cherished by his personal friends, and will be handed down to future generations, deeply engraved upon the records of science.

* See Part II., page 104.

† Since the above was written, I have received the painful intelligence of the death of my esteemed

But they were by no means intended to exhibit the entire results of each years' labors, but merely to indicate the advancement of the survey, and to furnish such general information as would enable the people of the state rightly to understand, and duly to appreciate those results, when they should be collected and systematised in a Final Report.

Before the close of the third year, for which provision had been made by the act of the legislature authorizing the survey, the State Geologist was appointed a Professor in the College at Amherst, Mass. Believing that the remaining field labors, for the completion of the survey, would be finished during the next season, and that he should derive much aid in the preparation of the Final Report, from the collections and library at Amherst, he deemed it his duty to accept the professorship offered him; but he did it, with the expectation that he would not be required to enter fully upon the duties of the professorship, until he had completed the survey and prepared his Final Report, and that our legislature would make the appropriations necessary for those purposes.

At this time, only a part of the specimens, collected from the various sections of the state, had been trimmed, ticketed and sent to the institutions for which they were designed. The remainder, embracing those which had been ticketed for the state cabinet, were in the depot at Middlebury. Anticipating legislative provision at the next session, for the completion of the work as above mentioned, the State Geologist directed his assistant, at Burlington, to obtain, at that place, a suitable room, or rooms, to serve as a depot for the tools, fixtures and untrimmed specimens; which being done, the articles, amounting to several tons, were forwarded from Middlebury and placed in it. In doing this, he reserved the principal fossils and the specimens ticketed for the state cabinet, which he, soon afterwards, took with him to Amherst, that they might be at hand, for examination and reference, while preparing his final Report.

At the session of the legislature, in Oct. 1847, the subject of the survey was taken up, but no appropriation was made, either for its continuance, or for the preparation of a Final Report.

In 1848 the subject was again taken up, but with no better success, and all that was done in relation to it, was the passage of a resolution, directing the Governor to employ some person to get back into the state, the materials and manuscripts, belonging to the Survey, and place them in the charge of the State Librarian, at Montpelier. That

duty the author of this work had the honor of discharging, in the summer of 1849, and his report to the Governor, was published in the Appendix of the House Journal, for that year. Since 1849, the subject of the Survey has, once or twice, been called up in the legislature, but nothing further has been done. The untrimmed and unticketed specimens are lying, packed in boxes, at Burlington, with a portion of the tools and fixtures; and the remainder are in charge of the State Librarian at Montpelier, and all these are fast losing their value.

The Geological Survey of the state, having been suspended before the examinations were completed; and the results of the labors performed, having never been collected together and systematically arranged, a full and satisfactory account of our Geology cannot yet be expected; and all that will now be attempted, is a hasty sketch of the general geological features of the state. There are important scientific questions, which an accurate knowledge of the geology of Vermont would, doubtless, very much aid in solving, but the acquisition of this knowledge will require much additional patient investigation and research; and the discussion of these questions, would require more space than could be afforded to the subject in this Appendix.

CHAMPLAIN ROCKS.

We shall begin our sketch of Vermont Geology at the western border of the state, and, proceeding eastwardly, give some general account of the different rock-formations in their order.

The rocks which occupy the lowest parts of the valley of Lake Champlain belong to that division of the Palæozoic rocks, denominated, by the New York geologists, the *Champlain Group*. Beginning with the oldest and most westerly, these rocks are arranged in the following order:

1. Potsdam Sandstone.
2. Calciferous Sandstone.
3. Chazy, or Isle la Motte Limestone*.
4. Trenton Limestone.
5. Utica Slate and Hudson River Shales.

The *Potsdam Sandstone* is largely developed at several places on the west, or New York, side of Lake Champlain, but is nowhere found *in situ*, within the limits of Vermont. The remarkable Chasm, through which the river Ausable passes, near Port Kent, is in this rock.

Calciferous Sandrock.—This, the second member of the Champlain group, appears on the Vermont side of the lake, but very sparingly. It is seen at the base of the

* This division embraces the Chazy and Fild's eye limestone, and Isle la Motte marble of the New York Geologist.

ISLE LA MOTTE LIMESTONE.

FOSSILS.

TRENTON LIMESTONE.

uplift of Snake mountain, in Addison county, and in a few other places.

Chazy, or Isle la Motte Limestone.—This is the most important member of the Champlain group, and the oldest, which is in much force in Vermont. This rock forms the principal part of the Isle la Motte, the western part of Grand Isle and the eastern shore of the lake, from Charlotte southward. It usually lies in thick, even-bedded strata, dipping, for the most part, slightly towards the east or northeast. It is of a close, compact texture, easily broken into regular blocks, and easily sawed, or hammered, and yet sufficiently strong to serve as the very best of building stone. It constitutes, in many places, the shore of the lake, and is in a position highly favorable for quarrying, and for transportation by water. Quarries of this limestone have been opened in various places, and it is extensively used for building and other purposes. Some of the best of these quarries are on the Isle la Motte; and among these, Fisk's quarry, on the west side of that island, is probably the most interesting and valuable. This quarry rises directly on the lake shore, and lies but a few rods from the usual line of steamboat navigation through the lake; and the shore is here so bold that the largest vessels on the lake may safely approach it within a few feet, and a very good landing is constructed. The quarry presents a working breast, rising about 85 feet above the lake. The strata vary somewhat in their aspect, but they are, in general, of a bluish gray color. The thickness of the strata, varies from eight inches to five or six feet, and each stratum preserves its thickness with great uniformity. The general dip of the strata is about 4° towards the north east.

Other excellent quarries have been opened on this island, of which Hill's quarry, and the Black Marble quarry, on the east side, are the most important. The Isle la Motte limestone, obtained at these quarries, and at others along the shore of the lake, is already extensively used in the construction of buildings and rail road bridges, and considerable quantities are sawed for hearths, or for being polished as marble. The black marble takes a very fine polish, and some of it is exceedingly beautiful. The surfaces of the natural seams and fractures of the strata of this marble, are frequently covered with a black, often iridescent, glazing, resembling the surface of anthracite, and it is probably carbonaceous.

The Isle la Motte limestone abounds in fossils, among which, species of *Maclurea*, *orthoceras* and corals are conspicuous, being seen in the worn and weathered surface of the rocks, in great numbers.



This cut represents the *Maclurea magna*, as it appears on the worn surfaces of the rocks, on the Isle la Motte, and at most places where the rock is found. The *Maclureas* are spiral shells, resembling in form our little fresh water shell called the Planorbis, but they grow to a very large size. When in the surface of the rock, and about half worn away, they frequently present a spiral coil, eight or ten inches in diameter, sometimes having so much resemblance to serpents coiled up, that the early settlers in the valley of Lake Champlain, regarded them as petrified snakes.



This cut represents the general form of the *Orthoceras*, as they appear in the weathered surfaces of the Isle la Motte limestones. The number of species found in this formation is very great, and the number and magnitude of the individuals, accumulated at some localities, is remarkably so. At some places on the Isle la Motte the rocks, for rods in extent, and several feet in thickness, seem to be made up almost wholly of *Orthoceras*, closely packed together in a limestone cement. Some of these are 18 or 20 inches long and 6 or 8 inches in diameter at the larger end. The interior of these shells is usually filled with calcareous spar, but they are sometimes found empty.



Several species of coral are found in this limestone. Some of these have a structure resembling that of honey-comb, and hence *Columnaria alveolata*. they have been supposed, by persons ignorant of geology, to be honey-comb petrified. Like the coral reefs, which are now in the process of formation in many parts of the ocean, they are the work of minute insects called zoophytes.

The Trenton Limestone.—This lies next in the ascending series. It occupies only a small extent of territory in Vermont, but is every where recognised by its characteristic fossils. From near the south end of the lake it extends northward as far as

UTICA SLATE AND HUDSON RIVER SHALE.

RED SANDROCK.

LONE ROCK POINT.

Charlotte, showing itself in the uplifts, at various places. It appears again in South Hero, and extends northward, through the western part of Grand Isle, and constitutes the south eastern and highest parts of the Isle la Motte. It also caps some of the elevations near the Medicinal Spring, in Highgate.

This rock is sufficiently compact and firm, in some places, to serve as a building stone, but it is, for the most part, thin bedded and shaly, and of very little value, excepting that it forms the basis of a good soil.

The species of fossils in the Trenton Limestone are exceedingly numerous. In the single genus, *Orthis*, they amount to no less than seventeen, which are peculiar to this rock; and in many other genera the species are nearly as numerous. In Grand Isle, this limestone is rather thick bedded, is of a light gray color, and almost entirely made up of shells of the *Orthis*. This stone, when the edge of the stratified mass was exposed to the heat, was found, unlike most limestone, to withstand the action of the fire, and, on that account, it was much used by the early settlers, for the construction of fire-places, on which account it is still distinguished by the name of *fire stone*.

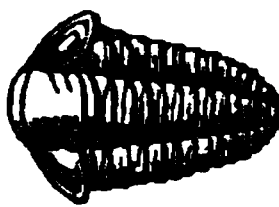


This figure exhibits the general form of an *Orthis*.

Utica Slate and Hudson River Shales.—Still higher, and to the eastward of the Trenton Limestone, lie a series of black slates. Some of these slates are rather thick bedded, are quite calcareous, and break with conchoidal fracture, and, lying immediately above the Trenton Limestone, are in some cases, with difficulty, distinguished from it. In other parts, the slaty laminæ are quite regular, and readily separated. But far the greater part of it appears to be crushed and broken into wedge-shaped masses, interspersed with seams of calcareous spar. In many places, these wedge-shaped shaly masses are covered with glazing, giving them the lustre and appearance of anthracite. So strong is this resemblance to coal, that many have supposed that there must be coal beneath it, and considerable excavations have been made in it with the vain hope of finding it.

These shales are the only rock in the place, in Alburgh; they form nearly the whole of North Hero, the eastern half of Grand Isle, Rock Dunder, Juniper Island, and most of the other small islands; and it forms the bank of the lake, along the east side, throughout almost its entire length. With the exception of that portion of them which lies next to the Trenton Limestone,

these shales are totally useless as a building stone. They, however, disintegrate into a black, rich soil, and are a valuable material for making roads.



Trilobite.

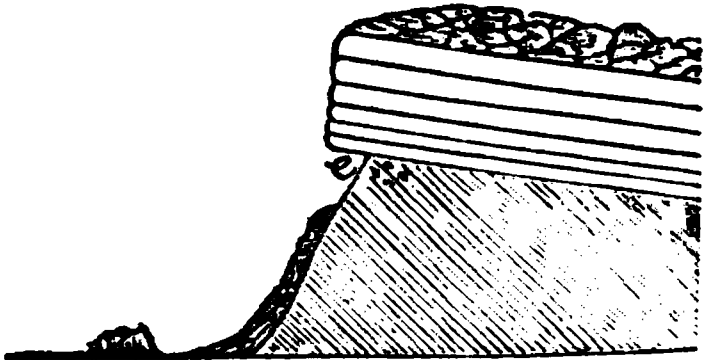
Trilobites are occasionally met with, particularly in the older portion, which has been sometimes separated from the other shales, under the name of *Utica Slate*, as well as in the *Isle la Motte Limestone*, before described.



Graptolites.

Graptolites are common in some few places, but as a whole, these shales are quite barren of fossils. The above cut will furnish some idea of the general appearance of graptolites. It pretty nearly represents *Graptolites amplexicaule*, found in the Trenton Limestone.

Red Sandrock.—The next series of rocks, lying above and to the eastward of shales, has been generally known in the neighborhood, as the Red Sandrock formation. This rock extends from south to north nearly the whole length of Lake Champlain. It makes its appearance in uplifts, presenting mural precipices towards the west, with a dip from 5° to 30° towards the east. Its western limit is marked by a series of considerable hills, which are at some little distance from the lake shore at the south and in the northern part of Franklin county; but from Shelburne to St. Albans Bay, it lies, for the most part, along the shore of the lake. Sugar Loaf and Glebe Hill, in Charlotte, Red Rocks and Lonerock points, in Burlington, and Mallet's Head, in Colchester, belong to the same line of uplifts. The accompanying cut represents a section passing through the uplift at Lonerock Point, where the thick bedded sandrock is seen resting on black glossy shales.



The shale, here, has been washed out from under the sandrock, large masses of which have broken off by their weight and fallen into the lake. These, excepting one, are covered, when the lake is high, but that one is seen at all times, and from all points of view, to stand prominently out of the water; hence the name, *Lone-rock*.

CHAMPLAIN GROUP OF ROCKS.

RED SANDROCK.

THE OWEN.

Point. We are aware that it has been generally called *Sharpshins*, but we think that it is quite time that vulgar name was discarded.

Towards the northern part of this uplift there commences a bed of dove-colored limestone, between the shale and the sand-rock, which appears with increasing thickness at Mallet's Head and St. Albans Bay; and at Swanton is quarried for marble. From Swanton it continues northward into Canada.

One of these uplifts, that of Snake Mountain, affords a fine exhibition of all the members of the Champlain Group of rocks, which we have been describing, as may be seen by the section below, which is copied from Prof. Adams' Second Annual Report on the Geology of Vermont, p. 168.



- a. Red Sandrock, forming the summit of the mountain, with an easterly dip of 20°.
- b. Debris from the Red Sandrock.
- c. Hudson River Shales, considerably covered with drift and debris.
- d. Utica Slate.
- e. Trenton Limestone.
- f. Isle la Motte Limestone.
- g. Calcareous Sandstone.
- A. Clay.

The rocks, which constitute the Red Sandrock series, differ very much in color, and in composition, or lithological character. The lower strata are, in many places, considerably calcareous, and thick-bedded, with the planes of stratification so much obliterated, as to give them the appearance of an igneous, or unstratified rock. The color of this portion is often gray, or variegated with different shades of brownish red and yellowish white; and parts of it are sufficiently calcareous to admit of being polished, and make a very compact and beautiful variegated marble. The best specimens of this have been found in boulders in connexion with the drift.

The middle portion of this series is almost entirely siliceous, and, through a great part of its extent from south to north, is of a dark reddish brown color; and it is the color of this portion which has given the name of Red Sandrock to the series. But in some places, this middle portion is nearly destitute of coloring matter, appearing as a light gray stratified quartz rock. In some places it is so purely siliceous as to be suitable for the manufacture of glass. *Caesars* also occur, where a stratum of pure white quartz intervenes between strata which

are highly colored. There is an example of this in Willard's quarry, in Burlington.

The colored strata of this sandrock furnish a very durable and beautiful stone for foundations and underpinnings of buildings, and, though somewhat refractory and difficult to work, has been very much used for that purpose. The foundations of the greater part of the buildings in Burlington, are of this material.

From the middle portion of the Red Sandrock series, the strata become more and more calcareous, in proceeding upward and eastward, till they, at length, become in many places a very pure limestone. This limestone is, generally, of a bluish color; but in some places, particularly in the eastern part of Shelburne, its color is pure white. Portions of this limestone make the very best of quicklime, which is largely manufactured from it, not only for use in the neighborhood, but for transportation into the interior of the state, and to places where no good limestone exists*. At Penniman's quarry and kilns, which are by the side of the railroad above Winsoski Falls, Messrs. Penniman & Cadin manufactured, in 1862, about 67,000 bushels of quicklime, and others, in the neighborhood, manufactured about 40,000 bushels, making over 100,000 bushels, the principal part of which was sent by railroad into the central and eastern parts of the state, and to other parts of New England.

Some portions of the Red Sandrock series are very regularly and handsomely stratified, but other portions are much disturbed and broken, or bent and folded. One of the most interesting plications in this rock, which have been noticed, is in Monkton. The south end of this plication is represented in the figure below.



The white spaces between the curved lines represent the edges of the strata. These are all of the ordinary sandstone.

The broad dark stratum, c c, is argillaceous slate, having the laminae nearly perpendicular to the plane of deposit. The upper portion of this, which is left wholly dark, has been removed, forming the cavity called the *Oven*.

* The good qualities of the quicklime manufactured from this stone is not only attested by those, who have used it in this country, but has been fully acknowledged, by competent judges, abroad. In 1861, T. H. Penniman, Esq., sent out a cask of his lime for exhibition at the World's Fair, in London. This lime was examined, by a Jury, appointed for that purpose, under the royal commission, and this jury awarded him a Prize Medal and Certificate, as testimony of its superior excellence, placing it in the first rank in competition with the world.

TACONIC ROCKS.

ROOFING SLATE.

STOCKBRIDGE LIMESTONE.

The portion represented in the cut, is about 30 feet broad at the base.

The general strike of the Red Sandrock formation is about N. 20 E., and the dip varies from 4° to 25° or more. Its width, from east to west, is very variable, but will average, perhaps, five miles.

This rock is very barren in fossils, and those found are very obscure, consisting of fucoidal layers, and fragments of crinoidea and trilobites. Marks of rain-drops, and wave and ripple marks are very common, and well defined. The fragments of trilobites have been found most abundant in this rock in Highgate, but they are there so much decayed, and so obscure, that it is very difficult to determine the species.

TACONIC ROCKS.

Under this name have been embraced the rocks in the southern half of the state, which lie to the eastward of the Champlain group, and to the westward of the main ridge of the Green Mountains. They occupy a large part of the counties of Bennington, Rutland and Addison. They derive their name from a range of high lands, which extend from the western part of Massachusetts into Vermont, and which are called the *Taconic Mountains*. The true geological position and character of these rocks is not yet well settled. While some regard them as primary, and others as metamorphic silurian rocks, Prof. Emons, and some others, have maintained that they are a distinct group of palæozoic rocks, which are older than the Potsdam Sandstone, which is the oldest member of the Champlain group.

The Taconic group of rocks consists of Roofing Slates, Sparry Limestone, Magnesian Slates, Stockbridge Limestone and Granular Quartz.

Roofing Slate.—The roofing slate of this formation is found principally in the western part of Rutland county, particularly in the towns of Castleton, Poultney and Fairhaven. Some sixteen or eighteen slate quarries have already been opened in these towns, many of which yield slate of a very superior quality. There are two principal varieties of the slate, one of which is of greenish color, and the other reddish brown. Several of the quarries have been opened very recently, and have not yet yielded a large amount. The yield of all the quarries above mentioned, in 1852, was estimated to exceed 10,000 squares, and the annual yield will doubtless go on increasing, from year to year, indefinitely. It already finds its way, not only to Boston and New York, but to Buffalo, Cleveland, and other cities at the west.

Sparry Limestone.—This rock stretches through the western parts of the counties of Addison and Rutland. It is divided and checked by numerous beds of calcareous spar. Its color is bluish, or gray of different shades.

Magnesian Slates.—These slates lie to the eastward of the roofing slates and sparry limestone, and to the westward of the Stockbridge limestone. They sometimes alternate with the latter, as the two former do with each other. They are most fully developed in the northwestern part of Bennington county, and southwestern part of Rutland county.

The magnesian slates are usually of a light grayish color, and often of a greenish hue. They, in many places, are easily split into broad flat masses, the surfaces of which often have a pearly lustre, and an oily feel. But for the most part, these slates are largely filled and checked with veins and seams of white quartz.

Stockbridge Limestone.—In an economical view, the Taconic group probably furnishes the two most valuable rocks in the state, excepting only the Isle la Motte Limestone; and these two are, the roofing slate, already mentioned, and the Stockbridge Limestone.

Commencing at the south line of the state, in Pownal, the Stockbridge Limestone forms a belt, which extends northward through the counties of Bennington, Rutland and Addison, as far as the town of Monkton. This belt is, on an average, nearly five miles wide, having the Magnesian slate on the west, and a range of Granular Quartz on the east. To the northward of Bennington county this rock occupies, for the most part, the valley of Otter Creek.

This range of limestone furnishes, through almost its entire extent, an abundance of excellent marble. Its color is generally light, varying from dove color to the purest white. Some portions of it are of a light flesh-color, and others are beautifully variegated; and at several places a very good statuary marble is found. Stephenson's statue of the wounded Indian, which was exhibited at the World's Fair, in London, was made from Vermont marble, obtained, I think, from a quarry in Rutland.

Marble quarries, at various places in the Stockbridge Limestone, have been more or less worked for many years. The principal of these are in the towns of Dorset, Rutland, Pittsford, Brandon and Middlebury. The great expense of transportation, for a long time prevented these quarries from being extensively worked, but the construction of railroads, along the whole line of this formation in Vermont, has opened easy out-

GRANULAR QUARTZ.

lets for the marble, and already largely increased the marble business. We have not room in this Appendix to go into particulars with regard to the yield of the various quarries. There is no doubt but that the marble business is destined to be one of the most important resources of the state.

Granular Quartz.—This forms a narrow range, or belt, extending from the south line of the state to the northern part of Addison county, between the Stockbridge limestone on the west, and the rocks of the Green Mountains on the east. This range is quite irregular, and in some places not easily traced. It is mostly of a dark gray, or brownish, color, and is very barren in minerals, containing only occasionally crystals of sulphuret of iron and schorl.

The Taconic rocks, generally, contain few interesting minerals; and the fossils which have been found in them are very few and obscure. These rocks have, for the most part, a steep eastern or south-eastern dip.

All the rocks, in place, in Vermont, lying to the eastward of the Champlain and Taconic groups, already mentioned, and occupying more than three-fourths of the state, have, till recently, been regarded as primary; but facts are daily coming to light which render it probable that the greater part of them belong to the palæozoic, or silurian series, and that they have been changed, and have had their fossils nearly all obliterated by heat. We shall not enter at all into the discussion of the geological age of these rocks, but confine ourselves to a hasty general description of them.

In a former work* I have regarded these rocks as primary, and have described them as belonging to two grand divisions, which are distinguished from each other by very obvious characteristics. The first of these divisions, lying next eastward of the rocks already described, and constituting the main central body of the Green Mountains, was denominated the *Talcose slate formation*, or division, from the general prevalence of that rock, particularly in the northern portion of it. The other division, extending eastward from this to Connecticut river, was called the *Calcareo-mica slate formation*. The line between these formations is, for the most part, well defined and easily traced, from south to north, through the whole length of the state. From the south line of the state, in Halifax, it runs in a direction nearly north through the towns of Newfane, Cavendish, Bridgewater and Bethel, to Northfield, and thence a little east of north through Montpelier,

Calais, Craftsbury and Irasburgh, to Memphremagog lake.

TALCOSE SLATE DIVISION.

This division, which constitutes the central portion of the Green Mountains, varies in width from about 14 miles, in the south part of the state, to 80 miles in the northern, and it embraces the loftiest mountain summits in the state.

The rocks of this division, though, generally, more or less talcose, vary considerably, in their aspect and composition. Beginning in the northerly part of the state, with the rocks next eastward of the Red sandrock formation, we find them shaly, very quartzose, and with very little talc or mica in their composition. They have a dip of about 40° to the east, and in some places the beds, or strata, are a fine conglomerate, the rounded pebbles being, for the most part, quite minute. In some parts the rocks have a greenish, or chloritic hue, and are so thick bedded and compact, as to make a very good building stone. This is particularly the case in the towns of Jericho and Westford.

In proceeding eastward the dip of these rocks increases rapidly, till it becomes vertical along the western foot of the Green Mountains, forming a synclinal axis. The line of this axis passes through the towns of Berkshire, Enosburgh, Bakersfield, Cambridge, Underhill and Jericho. To the eastward of this line the dip continues nearly vertical for several miles, being sometimes to the west, and, at others, to the east, forming a succession of synclinal and anticlinal axis. The dip then becomes uniformly westward, and continues so through the eastern part of the formation.

Interstratified with the Talcose Slate, we frequently find well characterized clay and mica slates; and in many places along the slopes of the Green Mountains, the talc and mica enter into the composition of the same slates in such equal proportions as to make it difficult to say which name more properly belongs to it. In Berkshire and Enosburgh there are extensive beds of well characterized clay slate, portions of which may hereafter be found suitable for roofing. A little further east, in Richford, is a narrow range of plumbaginous slate, which has been traced southward as far as Huntington, in the south eastern part of Chittenden county. In Cambridge, it is found sufficiently soft and black to form a tolerable substitute for black lead.

In many places along the western slope of the Green Mountains, the rocks lie in thick beds, or strata, each stratum splitting with nearly equal facility in all directions, and approaching to gneis in appearance

* Geography and Geology of Vermont, for Schools.

GOLD FORMATION.

DISCOVERY OF GOLD.

and composition; and it has been proposed to denominate the rocks, which constitute this great axis of the Green Mountains, *Green Mountain Gneis*.

The rocks embraced in our Talcose Slate Division, in the southern part of the state, are much less characteristic, than in the northern, and the different varieties of rock are much more broken and jumbled. No true granite or gneis have been observed in this formation, in the northern half, but both these rocks show themselves in the southern half, in various places. With the exception of a few small patches at the south, and three or four thin beds of saccharoid limestone, at the north, there are no rocks which contain any sensible amount of lime, in the whole territory embraced in what we have called the talcose division, and which constitutes about one-third of the whole surface of the state. Quartz is the great mineral element of this formation, for, besides forming the principal part of the various slates, shales, &c., it is almost every where infused and spread through them in great abundance, in the form of seams and veins. The color of these seams and veins is usually yellowish, white, or hyaline.

Gold Formation.—It has been known for a great number of years, that we have, in Vermont, a formation agreeing, in almost all respects, with the gold formation in the southern states, and in many other parts of the world; and it is a well known fact, that native gold was found here more than twenty-five years ago. The statement, which we published in a note on page 127, Part III., respecting a lump of gold picked up in Newfane, and weighing 8½ ounces, was extensively circulated in the newspapers soon after it was found. Our statement was derived from Gen. Martin Field, who had the lump in his possession. It was a fact well known to us, when our History and Gazetteer were published, that gold had been found in small quantities in the township of Somerset, by washing the alluvial gravel; but believing then, as we do now, that the success of Vermonters, in digging for gold, will be best secured by observing the Quaker's directions, *never to dig for it more than plough deep*, we took no pains to give prominence to these facts.

What we here call the Gold Formation constitutes a part of what we have been describing under the name of the Talcose Division. It forms a narrow and irregular belt, extending along near the eastern margin of the great division, above mentioned, and reaching through the entire length of the state. Beginning at the line of Massachusetts, in Whitingham, it extends northward, through the western part

of Windham county, through Ludlow, Bridgewater and Rochester, in Windsor county; through Roxbury, Moretown and Waterbury, in Washington county, and thence through Morristown, Eden, Lowell and Troy, to the north line of the state. The rocks, which mark the line of this formation, are talcose slate, steatite and serpentine, accompanied by magnetic, specular, chromic and titaniferous iron, also sulphuret and hydrous peroxide of iron. At some places, beautiful specimens of rock crystal occur, many of which are traversed in various directions by hair-like crystals of rutile, rendering them exceedingly interesting to mineralogists. The fine specimens of this kind which have been found in the drift in the valley of the Connecticut, probably had their origin in this formation. Although, long since, aware of the fact that the formation, in which gold was found in Windham county, extended through the whole length of the state, we had no knowledge that gold existed in Vermont to the northward of that county, previous to the fall of 1852, when gold was discovered in Bridgewater, Windsor county, by a Mr. Kennedy, and the discovery made known to the public by Prof. O. P. Hubbard, of Dartmouth College. The gold is found there in seams of quartz, and also, in alluvial gravel. Sufficient time and opportunity for examination have not yet been had, since the discovery was made, to determine its value. Some specimens of the gold, which we have seen in the quartz, though small, were exceedingly fine and beautiful.

In the neighborhood of the gold in Bridgewater, very fine specimens of galena, or sulphuret of lead, are also found, but we are not informed with regard to its extent; but as Bridgewater is our native town, we hope ere long to have ocular view of the revelations, which are being made there.

Although the formation, (in which gold is found) may be traced through the entire length of the state, it is not to be expected that gold will be found through its whole extent; nor is it, at present, at all certain that the *placers*, where gold has already been found, will yield gold enough to pay for working. This same gold formation, which passes through Vermont, has been traced from the north line of the state at Troy, nearly 200 miles into Canada. It passes along a little to the westward of Memphremagog lake to Orford, near Sherbrooke, and thence takes a more northeasterly course to the neighborhood of Quebec. Gold was found, in this formation, along the river Chaudiere, as early as 1834, and the discovery was announced in Silliman's Journal in April, 1835. From that time gold was collected there, in small

CALCARIO-MICA SLATE.

CLAY SLATE.

LIMESTONE.

quantities, up to the time of the discovery of gold in California; amounting in the whole to only a few hundred dollars. Since the geological survey of Canada has been in progress, more attention has been given to the subject, and it is found that the auriferous district is quite extensive. During the last three or four years the search for gold has been prosecuted more extensively, and the yield has amounted to several thousand dollars. In Ascot, near Sherbrooke, gold has been found in veins, associated with copper pyrites in a quartz gague; and it is reported that a lump of gold, weighing 14 oz., was obtained in that vicinity in the fall of 1852.

The steatite, or soapstone, and the serpentine, which we have mentioned, as indicating the line of the gold formation, are, probably, destined to be of quite as much economical value to the state, as the gold itself. The steatite is abundant, and is, in many places, of a very good quality. It has been quarried at Grafton, Bridgewater, Bethel, Moretown, Waterville, and, perhaps, a few other places. The serpentine is largely developed at Cavendish and Ludlow, at Roxbury, and at Lowell and Troy. Much of this serpentine is compact and firm, beautifully variegated with every shade of green, from the lightest tints to an almost perfect black; and, as it admits of a high polish, and is unaffected by heat and acids, it forms a most valuable ornamental marble. It has long been used, to a limited extent, in some of the neighborhoods where it is found, for fire-places, centre-tables, &c., and the opening of rail roads, through these several localities, will, probably, be the means of bringing this valuable marble extensively into use.

CALCARIO-MICA SLATE DIVISION.

Under this general name, we embrace all the territory of Vermont, not included in the divisions already described, with the exception of a few tracts of granite. It has been called the *calcario-mica slate* formation, or division, from the fact, that it consists, to a very considerable extent, of impure limestone, interstratified with argillaceous and mica slate. These three constitute the principal rocks, but they, in many parts, run into several other varieties of slate. Through the central part of Orleans county, and in Caledonia county, are extensive ranges of what might properly be called hornblende slate. In the northern part of Essex county, extending into Canada, is a range of siliceous slate; and in the southern part of that county there is a considerable development of chlorite slate.

The western portion of this formation,

from Barnard northerly to lake Memphremagog, is mostly clay slate. This slate constitutes a large proportion of that beautiful and fertile swell of land extending from Winoski to White River, through the towns of Berlin, Williamstown, Brookfield and Randolph. It is also largely developed in the north part of Montpelier, and in Calais, Craftsbury and Coventry. At Berlin, this slate has been found to answer very well for roofing; and it is not improbable that good roofing slate will be obtained from some of the other localities, which we have mentioned.

Clay slate also exists, in large quantities, along the Passumpsic and the west bank of the Connecticut river, in the counties of Orange and Caledonia, and also in the southeastern part of Windham county. At the latter place, it extends through the towns of Guilford, Brattleborough and Dummerston. The slate here is found to be very suitable for roofing, and has been, more or less, quarried for that purpose for many years.

The mica slate of this division is not, in general, very well characterized as mica slate. Indeed, the slates, or shales, of this division, appear to be a combination, or jumble, of almost all the known varieties, sometimes exhibiting a predominance of one kind and sometimes of another; and, again, we find the materials of three or four different varieties combined in a single stratum. There are, however, some small tracts, to which the above remarks are not applicable. This is the case with some parts of Windham and Windsor counties, where mica slate is found, well characterized, and forming a valuable and beautiful material for flagging.

The limestone of this division is, every where, very impure, containing a very large proportion of siliceous sand. It is burned in several places for quicklime, but the lime is nowhere of a good quality. It is made to answer in mortar for stone work, where better is not to be had; and it is usefully applied, in agriculture, as a fertilizer, to soils deficient in lime. But the lime made from the beds of shell-marl, which abound in this division, though that is not of the best quality, is much preferable to the above, both for the purposes of masonry and agriculture.

The color of this limestone, where unaffected by the weather, is of a bluish shade, and the stone is very compact and homogenous, splitting, or breaking, with nearly equal facility, in all directions. Where long exposed to the weather, it is recognized at once by its rust-colored, rotten surface. This rotten surface consists of the siliceous sand, which remains after the lime, which

TERTIARY FORMATION.

WHITE CLAY.

YELLOW OCHRE.

IRON ORE.

BROWN COAL.

had cemented it together, has been dissolved and washed out. In Hardwick, Berlin, and some other places, this blue silicious limestone is regularly arranged in parallel strata, showing very distinctly planes of deposit. But it more commonly occurs in irregular beds of unequal thickness, in the different varieties of slates.

Throughout nearly the whole of what we have called the *talcose* division of the state, the waters are soft and very pure, but those of the calcario-mica slate division are, on the contrary, hard, being, in general, strongly impregnated with lime. But the reason is obvious; for, in the former case, there is no lime, excepting what exists in the materials of the drift, while in the latter, besides the lime in the drift, the blue silicious limestone of the formation is diffused through every part, and being, by exposure, readily disintegrated and dissolved, keeps the waters of the neighborhood constantly impregnated with lime.

The principal metallic ores found in this division, are iron and copper *pyrites*, or the sulphurets of iron and copper. These, and particularly the sulphuret of iron, are found, though, for the most part, sparingly, throughout the whole division, usually in the form of small yellow cubes, which are not unfrequently mistaken for gold. The most extensive deposits of pyrites are at Strafford, Corinth, Woodbury and Brighton. That at Strafford is fully described, together with an account of the manufacture of copperas from it, in our description of that town in Part III., page 167. The veins of pyrites at Corinth consist of the sulphurets of copper and iron in nearly equal proportions. In Thetford there is a small vein of galena or sulphuret of lead.

In the different parts of this great division of the state, there is found a considerable variety of interesting minerals, most of which are mentioned in Part III., under the names of the towns in which they are found.

TERTIARY FORMATION.

It has been generally supposed, until within a very few years, that no geological formation existed in Vermont, of an age intermediate, between the lower silurian and the drift, or post-tertiary. In other words, it was supposed that the carboniferous series, and the secondary and tertiary formations, were entirely wanting. Still it has been long known that there was a series of deposits along the western foot of the Green Mountains, the geological age of which was extremely doubtful, and it was not till the discovery of the deposit of Brown Coal in Brandon, in 1848, that the uncertainty was in any degree removed.

The deposits above mentioned, commence in the south part of the state, at Bennington, and, extending northward, have been traced as far as Milton, in Chittenden county; and, probably, will be traced still further north into Canada. The material in these deposits, which first brought them into notice, was the brown oxide of iron, or brown hematite. This iron ore has been known and worked at Bennington, Pittsford, Brandon and Monkton, for a great number of years.

It was also early noticed that there were beds of a beautiful white clay, along the same line, generally in the vicinity of the brown iron ore. The nature of this clay was little understood, but being found to answer as a substitute for whiting, it was, for a while, considerably used in making putty for setting glass. Hence these beds of clay became known as *putty beds*. During the war with Great Britain, in 1812, one of these beds in Monkton was examined by Prof. J. Muzzy, who published an account of it, with an analysis of the clay, in the "Repository," a monthly periodical, published at Middlebury. He showed it to be *kaolin*, or porcelain clay; and efforts were made, about that time, to get up a manufactory of porcelain ware.

Subsequently, associated, for the most part, with the beds of brown hematite, were found, not only extensive beds of pure yellow ochre, but large quantities of the ores of manganese, both of which are articles of much economical value; and at some localities in the same connexion, were also found beds of very pure white quartz sand. The deposits, above mentioned, along the western foot of the Green Mountains, have been, as already remarked, known for many years. But in addition to these, in sinking shafts in the iron ore-bed, in Brandon, about 1848, a deposit of Lignite, or Brown Coal, was discovered, which has thrown some light upon the geological age of the deposits above described.

Of all the localities, to which we have referred, that at Brandon is the most interesting, not only on account of the Brown Coal, but on account of having all the other materials in conjunction with it. We have here, in the area of a few acres, the following substances, which are of economical value:

1. Pure white quartz sand.
2. Beautiful white and stained kaolin, or porcelain clay.
3. Yellow ochre.
4. Brown hematitic iron ore.
5. Ores of manganese.
6. Brown Coal.

The two first, in the above list, make their appearance at, or very near, the surface;

COAL AND IRON AT BRANDON.

FIGURES OF FRUIT.

IGNEOUS ROCKS.

and the coal may also be traced to the surface. But the great bulk of the clay, iron, manganese and coal, is buried at a considerable depth beneath the drift, which consists principally of pebbles, gravel and cobble earth.

In the area above mentioned, there have been sunk, principally for obtaining the iron ore, five shafts, to depths varying from 100 to 130 feet. From these shafts, at depths of 80 or 90 feet, drifts have been sent off in various directions, connecting the different shafts, and various galleries have also been formed by the removal of the ore. By the shafts and drifts, the iron, clay and coal have been passed through in various directions, and something has been learned respecting their relative position and extent. The locality was visited during the summer of 1852, by a number of distinguished geologists, among whom were Dr. Hitchcock, President of Amherst College, Sir Charles Lyell, Prof. James Hall, of Albany, and Mr. Foster, United States Geologist; and the conclusion seems to be, that the formation, embracing the hematitic iron ore, the manganese, the kaolin and the coal, are of the same geological age, as the brown coal of Europe, and, therefore, belong to the tertiary period.

The extent of the brown coal at Brandon, is not yet ascertained. It shows itself at, or very near, the surface of the ground, and has been found at the depth of 90 feet. It seems to descend somewhat obliquely, by the side of the kaolin, in a columnar form, about twenty feet wide and fourteen feet thick. The carbonaceous materials are of a dark brown color, approaching to black. Some portions of them are very completely converted into coal, while, in other parts, the woody structure and the form of the trees are clearly seen. Scattered in this mass of materials, for the most part near the surface, are found many varieties of seeds or fruits, which vary in size from that of a fig to that of less than a barley-corn. These fruits were at first supposed to be butternuts, walnuts, chestnuts, hazelnuts, &c., such as are now indigenous in Vermont, but a very slight examination suffices to show that they are unlike any vegetation now growing in our country.

President Hitchcock, in an interesting article* on the deposit of brown coal at Brandon, has figured about twenty species of the fruits found in it, and his figures, for the most part, agree very well with specimens of the fruit obtained by myself from the coal. To furnish some idea of these fruits, I give, in the next column, figures of a few of such of the fruits as I have in my possession.



The Brandon coal contains a considerable amount of earthy matter, but it burns readily, even when first taken from the bed; and is employed, almost exclusively, for fuel in driving the steam engine, by which the iron ore is raised and the water pumped from the mine.

As the hematitic iron ore, kaolin, manganese, &c., which occur at Brandon in conjunction with the coal, are found at numerous other places in Vermont, along the western foot of the Green Mountains, it is, also, highly probable that at some of these places, coal will likewise be found.

The conclusion to which President Hitchcock has arrived, from his examination of the subject, is, that the formation of which the Brandon deposit is a type, belongs to the tertiary period, and that it extends through the entire length of the United States, from Canada to Alabama.

IGNEOUS ROCKS.

The only unstratified igneous rocks in Vermont, which occupy any considerable extent of territory, are granite and serpentine. The fields of granite are nearly all included in the calcareo-mica slate division of the state. The granite appears, every where, to have been forced up from beneath, in a melted state, between the strata and beds of slate and limestone, sometimes in small isolated elevations; but for the most part in long narrow ranges, extending north and south, in accordance with the strike of the outcrop of the strata. This is particularly observable in the eastern part of the counties of Orleans and Washington, and in the western part of Caledonia county.

The most extensive tracts of granite, and the only ones, which have much width from east to west, are in Essex county, and in the southwestern part of Caledonia county, and the adjacent parts of the counties of Washington and Orange. It was from the southwestern part of this last tract, in Barre, that the granite was ob-

* *Hillman's Journal of Science*, Vol. XV.,—p. 94.

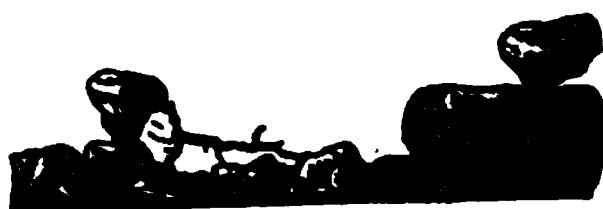
GRANITE BOULDERS.

ROCKING STONES.

TRAP AND PORPHYRY.

tained of which the State House was built. Further south, in the counties of Windsor and Windham, there are many isolated patches of granite and gneis, but with the exception of Ascutney mountain, they are of quite limited extent. In numerous places, granite is seen traversing the other rocks, in the form of dikes, veins and seams. This is particularly observable in Marshfield and Woodbury; and this fact, and, also, the fact that fragments of clay slate are there found, embedded in the granite, make it certain that the granite has been in a melted state since the formation of the slate.

Granite boulders are scattered, more or less abundantly, over the whole of this division of the state. In the northeastern part, they are exceedingly numerous, and many of them are of very great magnitude. From a single granite boulder, in Greensborough, the material for a good sized stone house, including the walls of the cellar, were obtained, without using it all. Another isolated boulder in that town, is 41 feet long, 22 feet high, and, in the widest part, 25 feet wide, and is calculated to weigh more than a thousand tons. About half a mile from this large boulder, there are two smaller granite boulders, about 80 feet apart, so nicely balanced, on other granite rocks, as to be easily rocked by a push with the hand, and hence they have acquired the name of *the rocking stones*.



Rocking Stones.

The accompanying rude cut will serve to show their relative positions. They are both considerably elevated above the surrounding country. The one at the right hand in the figure is 9 feet high, 12 feet long, and weighs about 70 tons. It rests upon another mass of granite about 16 feet high. The other rocking stone, at the left, is 8 feet high and 11 long, weighing about 40 tons.

The granite of this division, though generally good, and, much of it, of a superior quality for building purposes, exhibits, nevertheless, several varieties. Perhaps the most remarkable of these, is that found in place in Craftsbury and Northfield, and which has, sometimes, been called *Nodular Granite*. The granite is of the ordinary character, with the exception of having flattened balls of black mica, about one inch in diameter, scattered through it, like plums in a pudding. These balls, or concretions, are composed of concentric

layers of black mica, separated from each other by extremely thin layers of pure white quartz. In some portions of this granite the balls, or nodules, constitute quite one-half of the entire mass, while, in other portions, they are scattered very sparingly, often several inches asunder, in all directions. The only locality, beside those just mentioned, where this granite is found in place, is just over the north line of Vermont, in Stanstead, C. E. Boulders of it are scattered, sparingly, over a great part of the surface of the counties of Orleans and Caledonia.

The *serpentine* has been already mentioned in our account of the talcose division, as occurring along the line of the gold formation. Some of those tracts are quite extensive, forming hills of considerable elevation. This is the case in Cavendish, Lowell and Troy. In the serpentine in Lowell, fine specimens of asbestos and of different varieties of amianthus, are common. In Troy, it contains a large irregular bed or vein of iron ore. The ore appears well, and extensive works were erected for manufacturing it into iron; but the difficulty of working it, on account of the titanitic acid it contains, and the cost of transportation, rendered the business unprofitable, and the works were, therefore, abandoned and have gone to decay. The following is the result of the analysis of this titaniferous iron ore, by Mr. Olmsted:

Peroxide of iron, - - - -	81.20
Protoxide " - - - -	13.37
Titanic acid, - - - -	4.10
Silica, - - - -	1.33

100.00

Metallic iron, - - - -	66.62
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Chromic iron is also met with in many places in the serpentine of this neighborhood. In Jay, there are veins of it two feet wide. The ore is of good quality, and might easily be obtained to any amount. Its analysis, by Mr. Hunt, gave the following result:

Green oxide of chromium, - -	49.90
Protoxide of iron, - - - -	48.96
Alumina, with traces of silica, &c.,	1.14

100.00

One hundred parts of this ore will yield 191 parts of chromate of lead, or chrome yellow.

TRAP AND PORPHYRY.

These are found in Vermont only in the form of dikes, or intrusive beds among the other rocks. Trap dikes are met with in all parts of the state, but they are much more common in some parts than in others.

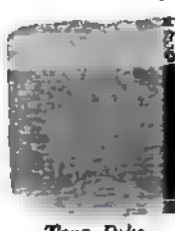
TRAP DIKES.

PORPHYRY DIKES.

IGNEOUS ROCK.

In the central part of the state, in the talcose slate formation, they are exceedingly rare. They are more common in the eastern part of the state; but abound most of all in the vicinity of Lake Champlain, and, particularly, in the neighborhood of Burlington.

The strike of the various stratified rocks in Vermont is, generally, from a little west of south to a little east of north, while the trap dikes, for the most part, cut through these rocks in a direction nearly east and west. The width of these dikes varies from three or four inches to five or six feet. The width of the greater part differs but little from three feet. They sometimes cut through the rocks quite obliquely, both to the strike and the horizon, but are more commonly nearly perpendicular to both. In some cases, the same dike may be traced for several miles, in nearly a straight line, across the outcrop of the strata. In other cases they will terminate suddenly, and commence anew, at some little distance to the right or left, and then proceed onward in the same direction as before. Faults of this kind are of frequent occurrence in the numerous trap dikes, which exist in the black shales along the eastern shore of Lake Champlain. The accompanying cut represents one of these, as seen in the bank of the lake at Clay Point, in Colchester.



The fault is an offset of about three feet. The dike is in black slate. The part of the bank above it is sand. At Hubbell's Fall, in Wincooski-river, two faults may be seen, in the same dike, in the bottom of the river.

Trap Dike.

Some of these dikes are very compact and homogenous. Some have a concretionary structure, and, by exposure to the weather, separate into spheroidal masses. Others again exhibit signs of a columnar structure; and still others contain numerous light colored crystals, giving it an amygdaloidal character. An interesting dike of this character may be seen in a small island in Lake Champlain, a little to the northward of Colchester point.

The *Porphyry Dikes* are mostly confined to the southwestern part of Chittenden county. Like the trap dikes, they have, in general, an easterly and westerly course, but they are much more irregular in their direction, and much less uniform in width. In some places they seem to bilge up in large rounded masses, crowding and crushing the slate all around. The color of these

dikes and intrusive masses, varies from a dark chocolate brown to a light cream color. In some cases, the embedded crystals are very numerous, in others, they are rare; and in others still, no crystals are seen, but they appear to consist of a homogeneous mass of feldspathic mineral.

No part of the state, which has been examined, so much abounds in dikes, both trap and feldspathic, as the northwestern part of Shelburne. Pottier's point is crossed by a dozen, at least. At Nash's point, the two kinds of dike are seen together, in circumstances to afford a clear indication of their relative ages. Their positions may be understood by the accompanying cut.



Porphyry Dikes.

The cut, which represents the western side of the point, exhibits a perpendicular face of porphyry, about 11 feet high and some rods in length, resting upon black slate, and covered above by about 2 ft. of black slate and soil. Cutting through the slate, in an easterly direction, beneath the porphyry, are two parallel trap dikes, about eight feet apart, and each about one foot wide. Portions of these trap dikes are also found in the slate overlying the porphyry. These facts make it certain that the trap dikes existed in the slate before the porphyry was thrown up, and that they were broken off, and parts of them lifted up with the slate by the intrusion of the porphyry. The more recent origin of the porphyry is also inferred from the fact that it is frequently found to have flowed laterally between the strata of the rocks, while the trap is never found to have done so, showing that the latter was formed under a much greater incumbent pressure than the former. Trap has been no where found in Vermont in the condition of an overlying mass.

The only purely igneous rock, observed any where in Vermont, on the west side of the mountains, in any other form than that of dikes, is in Charlotte. It there forms the hill, south of the Four Corners, and presents a surface of a number of acres. It is, in appearance, intermediate between common trap and porphyry, and most of it is exceedingly hard. The position of this hill may be seen on the map of Charlotte, given on page 19, it being the hill indicated on the map nearest the locality of the fossil whale.

SUPERFICIAL DEPOSITS.

DRIFT MATERIALS.

LAWRENCIAN DEPOSIT.

SUPERFICIAL DEPOSITS.

Drift Scratches.

The rocks which have been briefly described, with the exception of our tertiary formation, are all fixed in the places in which they are found, and form the solid foundation of our territory. The surface of these rocks, where exposed to view, are every where found to be ground, or worn down by some agency, frequently having their surfaces finely polished, and crossed by numerous parallel striæ, or scratches. These striæ, or scratches, lying in the same direction, in which the loose materials, resting upon the solid rocks, have been transported, are supposed to have been produced by the movement of these materials; and, as the materials have received the name of Drift, the striæ, or grooves, are called *Drift Scratches*. The general direction of these scratches, and of the transportation of drift materials, is towards a point a little to the east of south, but varies in different parts of the state, somewhat in conformity to the directions of the valleys and the ranges of mountains.

The smoothing and striation of the surfaces of the rocks are most conspicuous, when the earthy materials are first removed from them. In some varieties of rocks they are seen, in a great measure obliterated by exposure to the weather. These polished and striated surfaces are found, not only in the bottoms of the lowest valleys, but upon the tops of the highest mountains in the state. Mount Washington, in New Hampshire, appears to be the only point in New England, which was not reached by the agency which produced them. The rocks, which form the summit of that mountain, are all sharply angular, exhibiting no appearance of having been worn, or scratched.

Drift Materials.—The smoothed and striated solid rocks, which we have been describing, are, in nearly all parts of the state, covered by a deposit, very variable in thickness, and consisting of boulders, pebbles, gravel, sand and clay, variously and irregularly blended together, without any distinct signs of stratification. These materials are, for the most part, different from the rocks on which they rest; and, as they are usually accompanied by evidence that they have been transported in a southeasterly direction, they have received the general name of *Drift*. In some places the drift consists entirely of sand; in other, of clay; in others, of gravel; but these are usually of small extent. The materials are more commonly mixed, but in very different proportions in different places. It is quite common to find them in the condition of what is called *hard-pan*, wherein sand,

clay, gravel and pebble are so completely bedded together as to make it extremely difficult to penetrate them.

The proofs that the drift has been transported in a southerly direction, and never in a northerly direction, are very abundant. The large boulders of sienite and other rocks scattered through the valley of Lake Champlain, have evidently been brought from beyond the 45th parallel of latitude, there being no rocks of their kinds within the limits of the state. Boulders of Trenton and Isle la Motte limestone are found scattered along the western slope of the Green Mountains, and resting on talcose slate, far to the southeastward of the quarries from which they must have been derived. Boulders of the red sandrock, which is found in place only near the lake shore, are met with in masses, of several tons, in Williston and Richmond, and high up on the sides of the mountains, and even to the eastward of Camel's Hump, in Duxbury, there is a boulder, which weighs about three tons, and which very clearly came from the lower strata of the red sandrock formation, near the level of Lake Champlain. It is now 20 miles from the nearest part of that formation, and rests upon talcose slate, at an elevation of about 700 feet above the level of the lake.

The transportation of boulders of what we have called Nodular Granite, has already been mentioned. They are found, of large size, in Waterford, Ryegate, and other places, 80 miles from any locality, where the rock is in place. Instances might be mentioned, where boulders of this rock have been transported over deep valleys, and lodged near the summit of the elevation on the opposite side.

LAWRENCIAN DEPOSIT.

Throughout the valley of the St. Lawrence, the valley of Lake Champlain, and around Lake Ontario up to the Falls of Niagara, there is found a regularly stratified formation of sands and clays, to which has been given the name of the *Lawrencian Deposit*. The thickest parts of this formation, in the valley of Lake Champlain, is about 200 feet, and the highest part of it is, at least, 400 feet above the level of the ocean. The southern portion of it consists chiefly of clay, while in Franklin county and the northern part of Chittenden county, sand predominates, particularly at the surface.

It is clearly a marine deposit, being well filled with remains of marine bivalve molluscs and other animals; and, as nearly, or quite, all of these remains belong to existing species, it is plain that it belongs

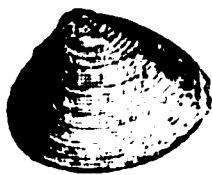
FOSSIL SHELLS.

FOSSIL SPONGE.

FOSSIL WOOD.

to a very recent geological period, or is what is called a Pleistocene, or post tertiary formation. These remains are mostly shells of molluscs, with a few remains of whales, seals and fishes; and they are nearly all identical in species with those living on the coast of New England, and in the Gulf of St. Lawrence.

Nearly an entire skeleton of a whale was found in this formation, in Charlotte, as mentioned on page 15. A number of the lumbar and caudal vertebræ of a whale, probably of the same species, have also been found in a similar clay bed, on the Island of Montreal, as already stated in a note on page 20. The species of fossil shells, found in this formation, are quite numerous, but the most common in the Champlain valley are the following:

*Sanguinolaria fusca*.—

This is the most common and abundant species. It is met with, in hundreds of places, along the banks of the lake and streams, in digging wells, in making excavations for roads and railroads, and in cultivating the lands. It is met with at the distance of several miles from the lake, and often more than 200 feet above it.

*Saxicava rugosa*.—

This species is quite common, but is not so generally diffused as the preceding. The shell, being thick and strong, is often found in a very good state of preservation.

Mya arenaria.—This is the largest of the fossil shells found here. There are fewer localities of this than of the two preceding species, but at some of these the individuals are so multiplied as to be exceedingly numerous; and they are often well preserved.

Nucula portlandica.—This shell is found low in the blue clay, but is not abundant.

Mytilus edulis has been found only at a few localities; but in some cases the individuals are quite numerous. They are seldom well preserved.

The *Sanguinolaria fusca* is a littoral mollusc, which lives and propagates only in the sweep of the tide. This fact throws light upon the progress of subsidence of the St. Lawrence and Champlain vallies, by which the ocean, (from which the Lawrencian deposit took place,) was admitted into them. In various strata we have this mollusc embedded in the position in which it buries itself, when alive, and where it had evidently propagated, with the two valves united, and the epidermis undisturbed. These strata must, therefore, have been at the surface of the ocean, when the animals were buried. But we find them thus bedded in strata more than 60 feet

apart, in vertical height, showing clearly that the subsidence was a very gradual one.

Fossil Sponge.—While digging a well in Alburgh, about four years ago, at the depth of 11 feet, the workmen came upon a horizontal stratum of what appeared to be mats of hair. It was in quite compact clay, was about two inches thick, and extended over nearly the whole bottom of the excavation. It excited much curiosity, but very little of it was saved. Having obtained a small quantity of it, I sent it in a letter to my friend, Prof. J. D. Dana, who pronounced it, both upon his own authority and that of Prof. Bailey, of West Point, to be *Fossil Marine Sponge*.

Fossil Wood.—It is not uncommon, in the vicinity of Lake Champlain, to find wood, and other vegetable matter, buried at various depths in the earth, in places and under circumstances, in which we should little expect it. There have been several cases of this kind in the village of Burlington, which I shall here mention, and all of which, with one exception, have fallen under my own observation; and that one is well attested.

The first of these cases was in 1835. That year the Hon. Alvan Foote, who resides, about 40 rods, directly north of the University, dug a well near his residence. The surface of the ground, at the place, was originally covered with a heavy growth of timber, and large boulders were thickly scattered over it. In digging the well, the first four feet were loose earth and gravel. The next 20 feet were what is commonly called *hardpan*, consisting of pebbles, gravel, sand and clay, very solidly compacted together. Next came a sandy earth, which could be shoveled without being loosened with a pickaxe, for about 4 feet, when the workmen, to their astonishment, broke into a hollow cavity, extending across the bottom of the well.

Upon examination, the cavity was found to have been occupied by a large tree, supposed to be pine, parts of which were remaining, and quite sound. It had been embraced by the sand; but, a few inches lower down, a stratum of black carbonaceous matter was found, resembling muck. The natural surface of the ground, where the well was dug, was about 240 feet above Lake Champlain, and the tree was 29½ feet below the surface of the ground.

The next case was in 1850. In making the excavation, on Pearl street, for the reservoir, connected with the aqueduct, which supplies the lower part of Burlington with water, at the depth of 13 feet from the surface of the ground, a large amount of wood, sticks and leaves were found embedded in clean gravel. The locality is about 200 feet above the lake, and the size of the

FOSSIL WOOD.

SHELL MARL.

MARL-BEDS.

excavation was 36 feet by 40. The surface of the ground sloped moderately towards the northwest, and was originally covered heavily with timber. The earth, after getting below the soil, was sand and gravel, which had been washed and assorted by water, and was lying in irregular beds, sloping steeply towards the northwest. The vegetable remains formed a mass in the gravel about two feet wide, one and a half foot deep, and 36 feet long, extending in a right line, and was, at first, mistaken for a rotten tree; but, on breaking it to pieces, it was found to consist of roots, limbs, bark, stems and leaves, snugly bedded together, and all of a dark brown color; some portions of it approaching, in appearance, to brown coal. Many of the sticks and roots were perfectly sound, and exhibited the structure of the wood completely, and are, I have little doubt, the American Larch, *Pinus peudula*.

In October, in laying the aqueduct pipes in the south part of the village, wood, resembling larch and oak, were found, at the depth of 10 feet beneath hardpan. And in April, 1852, in deepening the well at the Pearl Street House, which is midway between the two localities first mentioned, a piece of wood, ten inches long, six wide and three thick, was found below hardpan, 24 feet from the surface. The Pearl Street House is about 230 feet above the lake. Wood has also been found in the central part of the village, in the stratified sand and clay, 20 feet below the surface.

The question now arises—to what geological period does this fossil wood belong? The last mentioned certainly belongs to the post tertiary or Lawrencian, for the characteristic shells were found with it. In the other cases, the earth was unstratified, and the materials, which covered the wood, evidently belonged to the drift. But did the wood belong to the drift period?—or to the tertiary which preceded it?

To these last questions, I would answer, that, in my opinion, it belonged to neither. The wood, and materials associated with it, are totally unlike the lignite, and its associates, which constitute the tertiary at Brandon, and no one can for a moment regard them as belonging to the same period. But the wood is beneath or within, what are, evidently, drift materials. How can this be, unless the wood and drift are of the same age?

To answer this question, we are to consider that the elevation on which the University stands, was, at the close of the drift period, a high ridge of drift deposit, having a steep descent towards the northeast and northwest. Subsequently the whole Champlain valley subsided, the sea was let in, and

this elevated ridge became more and more immersed, and the materials forming its steep declivities were gradually washed down and re-arranged by the action of the waves.

Previous to the burial of the tree first mentioned, there appears to have been a small marsh at the foot of the steep bank of drift. When the subsidence had let the sea in upon this marsh, the tree was floated in and lodged at the foot of the bank. The subsidence continued, and the action of the waves soon washed down the drift materials and covered the tree; and we have evidence that the valley continued to sink till the whole ridge was immersed, and the island disappeared. During this immersion, the materials continued to be washed down, and beaten and pressed together by the surf and weight of the water, until the wood became buried in the condition in which it is found, since the sea was emptied out by the upheaval of the valley; so that while the wood is buried in the drift, it has been buried by a re-arrangement of the drift materials, since the drift period.

SHELL MARL.

The beds of shell marl in Vermont are considerably numerous, and some of the beds are quite extensive; but they are entirely confined to what we have called the calcario-mica slate division, on the east side of the Green Mountains, and to a small portion of the western border of the state. On that large central portion of the state, which we have called the talcose slate division, not a single marl-bed is known to exist. The marl, which constitutes these beds, has a general resemblance to pulverised chalk, and consists, essentially, of carbonate of lime, which has resulted from the partial decay and crumbling of innumerable fresh-water shells, with sometimes a slight intermixture of sand and clay. Though, when wet, like a bed of putty, and when dry, a pulverulent mass, still shells, more or less entire, are found to be scattered through all parts of it: and near the surface unbroken shells are often numerous.

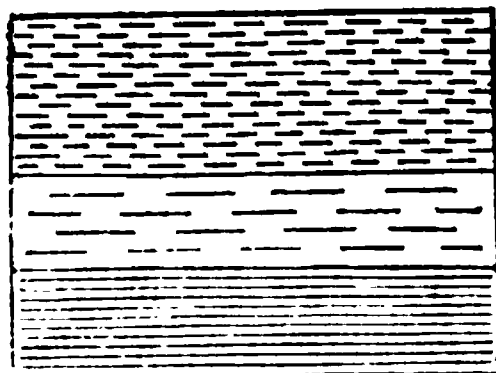
These shells are, for the most part, of the same species, which are now found living in the ponds and streams of the neighborhood, and belong chiefly to the following genera, viz: *Paludina*, *Limnæ*, *Physa*, *Planorbis*, *Pupa* and *Cyclas*.

Marl beds exist in all the counties on the east side of the mountains, but are most numerous in Caledonia county. There are several in each of the towns of Barnet, Peacham and Danville. In Orleans county, and in the eastern part of Washington county, there are a few. The following section exhibits the thickness and association of one of these marl beds in Derby, with

MUCK AND MARL BEDS.

VEGETABLE MUCK.

its overlying muck and underlying sand :



Muck,
4 feet.

Marl,
3 feet.

Sand.

Muck and Marl Bed.

The most valuable bed of marl known on the east side of the mountains, is in Williamstown. It is from 6 to 18 feet deep, and slightly covered with a dry soil. It is very pure carbonate of lime, and makes the best quicklime obtained in that part of the state. Its analysis, by Mr. Hunt, gives the following results :

Carbonate of Lime,	- - - -	89.
Carbonate of Magnesia,	- - - -	4.2
Silica, with traces of oxide of iron and alumina,	- - - -	1.
Water and organic matter.	- - - -	5.5=99.7.

The marl beds on the west side of the mountains are not numerous, but some of them are quite extensive. The most interesting beds are those in Monkton and Alburgh. That at Alburgh extends over 60 acres. Where examined, it was found to be from 6 to 9 feet deep, resting on fine blue clay, and covered by vegetable muck to the depth of five feet, upon which there had been a large growth of forest trees. Supposing the average depth of the marl to be only three feet, the aggregate amount would exceed 60,000 cords, and the muck resting upon it would probably exceed 100,000 cords.

An account of the marl in Monkton pond, and of the manner in which these marl-beds are formed, may be found in Prof. Adams' Second Annual Report on the Geology of Vermont, page 148.

Shell marl is valuable, both for the manufacture of quicklime, and as a fertilizer to be applied to the soil. To obtain good quicklime from it, it should be moistened, made into the form of bricks, and, after being dried, should be arranged and burned in kilns, for the expulsion of the carbonic acid, by fires placed beneath, as is done in the manufacture of common bricks. This is the course pursued at Williamstown, where our best marl lime is made.

The value of marl, as a fertilizer, depends upon the constituents of the soil to which it is applied. If the soil is already sufficiently supplied with lime, for the purposes of vegetation, the application of marl will produce no sensible effect ; and this is generally found to be the condition of the soil in those neighborhoods in which marl-beds are found. Indeed, the connexion between

the marl and the lime, in the soil and waters of the vicinity, is very obvious ; for the pre-existence of the latter, is absolutely necessary, for the existence and multiplication of the molluscs, whose shells form the marl. If the lime did not exist in the water, there would be no material for the formation of the shells, and, therefore, the animals could not exist. Hence we learn the reason why there are no marl-beds on the talcose slate division of the state. There are, there, no limerocks, and only a very minute amount of lime in the soil and water, and hence there are hardly any land, or fresh-water shells. The soil, throughout the whole of that division, would undoubtedly be improved by the application of marl. The soil in the calcario-mica slate division, is, in general, well supplied with lime, by the decomposition of the blue siliceous limestone ; and, in the western part of the state, by the marine fossil shells contained in it, and by the decomposition of the different limestones, which abound ; excepting the sandy plains. These, though resting upon limestone, are very deficient in lime, and are greatly benefitted by the application of marl.

VEGETABLE MUCK.

In all parts of the state are found deposits of muck, consisting of partially decomposed leaves and other vegetable matter. These deposits vary in extent from a few square rods to many acres, and are from a few inches to 15 and 20 feet in depth. When the country was new, most of these were bogs, many of which have since become dry, either by draining, or by exposure to the sun and winds, in consequence of the removal of the forests. They are, not unfrequently, found resting on beds of marl, as has been already mentioned.

The cavities, in which these beds, both of muck and marl, are found, were, undoubtedly, originally, little pools or ponds of water, which gradually became filled up with the shells of successive generations of molluscs, and vegetable matter, thus diminishing the size of the pond by surrounding it with a bog, or, what was more commonly the case, filling it entirely, leaving only a bog in its place.

This muck is a valuable manure for most soils, and nature has provided plentiful stores of it, in almost every part of the state. Some of our farmers have already learned its use, as a fertilizer, and profited by its application ; and we trust that it will soon be more generally appreciated, and more extensively used. The value, both of the muck and marl, for the improvement of some soils, is thought to be much enhanced by applying them in conjunction.

INFUSORIAL SILICA.

Several deposits are met with in different parts of the state, which, in their situation and appearance, very much resemble shell-marl, but instead of being, like that substance, calcareous, are a fine siliceous earth. By examination, under the microscope, this earth is found to have originated from the flinty shell of infusorial animalcules, in the same manner that the marl was formed from the calcareous shells of molluscs, and hence it received the name of *Infusorial Silica*.

The most extensive deposit of infusorial silica, known in the state, is in Hosmer's pond, in the southwestern corner of Peacham. This pond is surrounded by granite hills, and covers about 250 acres. The infusorial deposit is thought to average about six inches in depth, over the bottom of about two-thirds of the pond. When taken out and dried in lumps, it is a very good substitute for chalk. When dried and pulverised, it resembles calcined magnesia; and, hence, the pond is called, sometimes *Chalk pond*, and sometimes *Magnesia pond*. There is another small deposit of infusorial silica, in Maidstone, in Essex county.

By the examination of specimens of the silica, from these deposits, by Prof. Bailey, of West Point, the shields of more than twenty distinct species of animalcules, were discovered in it. Some of these are so exceedingly minute, that, incredible as it may seem, it would require a million of them to make the bulk of a single mustard seed. By the labors of Ehrenberg, and others, these microscopic fossils have all been arranged, described and figured, so far as known, and many of the forms are exceedingly beautiful. I give, below, the figures of a few of the many species found in Hosmer's pond. Their areas are magnified in the cuts, about 73,000 times.



CLAY STONES.

Concretions of various kinds are found in Vermont, but the most common are those found in beds of clay, and generally known by the name of *Clay Stones*. These clay stones exhibit an almost infinite variety of forms. Many of them appear as if skilfully turned in a lathe, or beautifully carved by art; and hence they are every where regarded as objects of curiosity. Their most common form is that of a convex lens, or flattened sphere; but various forms are often blended together, in the most grotesque and fanciful manner. At some localities, they are found in the form of a perfect ring, like the ring of an ox-yoke, both in form and size. Those concretions, which abound in the Lawrencian formation, in the neighborhood of Lake Champlain, are generally cylindrical, having their longer axis nearly perpendicular to the stratification of the clay, and prolonged through several of the strata. These cylindrical concretions are all formed of concentric layers around the axis of the cylinder, which axis is a capillary opening, extending through its whole length. They appear as if they had been formed around fibrous roots, which had afterwards decayed out, leaving a small perforation, like a pith, extending through their whole length.* Localities of clay stones and other interesting concretions exist in various parts of the state, and are too numerous to be particularized.

* Having an opportunity, in 1851, to examine the Crag formations in the east part of England, I satisfied myself that the, so called, coprolites, which abound there, and are so highly prized and extensively used as a fertilizer, are, for the most part, at least, concretions formed in the same manner as those above named. They differ in the materials of which they are composed, but do not, apparently, differ in the manner, in which they are formed. While ours contain carbonate of lime, those found in the Crag, in England, are said to consist of 65 per cent. of the phosphate of lime, and hence the great value of the latter as a fertilizer. The clay in which those concretions were found, had probably abounded in fossil bones, and the decomposition of these bones furnished the lime, in the condition of a phosphate, for the formation of the concretions. Thousands of tons of these concretions are said to be, annually, separated from the Crag, and used as a manure.

POPULATION OF VERMONT.

There have now been seven complete enumerations of the inhabitants of Vermont, since the organization of her government. The result of six of these are given, by towns, in Part II., page 209. The result of the seventh is given below.

POPULATION OF VERMONT IN 1850.

Towns.	Pop.	Towns.	Pop.	Towns.	Pop.	Towns.	Pop.
Addison,	1279	Andover,	725	Averill,	7	Bakersfield,	1523
Albany,	1052	Arlington,	1084	Avery's Gr., F.C.	48	Baltimore,	124
Alburgh,	1568	Athens,	859	Buell's Gore,	18	Barnard,	1647

POPULATION OF VERMONT—

SEVENTH CENSUS.

Towns.	Pop.	Towns.	Pop.	Towns.	Pop.	Towns.	Pop.
Barnet,	2521	Fairlee,	575	Montgomery,	1001	South Hero,	705
Barre,	1845	Fayston,	684	Montpelier,	2310	Springfield,	2762
Barton,	987	Ferdinand,	0	“ East,	1447	Stamford,	883
Belvidere,	256	Ferrisburgh,	2075	Moretown,	1335	Starksborough,	1400
Bennington,	3923	Fletcher,	1084	Morgan,	486	Sterling,	283
Benson,	1305	Franklin,	1646	Morristown,	1441	Stockbridge,	1327
Berkshire,	1955	Georgia,	2686	Mt. Holly,	1534	Stow,	1771
Berlin,	1507	Glastenbury,	52	Mt. Tabor,	308	Strafford,	1540
Bethel,	1780	Glover,	1137	Newark,	434	Stratton,	286
Bloomfield,	244	Goshen,	486	Newbury,	2984	Sudbury,	794
Bolton,	602	Goshen Gore, nor.	183	Newfane,	1304	Sunderland,	479
Bradford,	1723	“ “ south,	32	Newhaven,	1663	Sutton,	1001
Bradleyvale,	107	Grafton,	1241	Newport,	748	Swanton,	2824
Braintree,	1228	Granby,	127	Northfield,	2922	Thetford,	2016
Brandon,	2835	Grand Isle,	666	North Hero,	730	Tinmouth,	717
Brattleborough,	3816	Granville,	603	Norton,	0	Tapsham,	1668
Bridgewater,	1311	Greensborough,	1008	Norwich,	1978	Townsend,	1854
Bridport,	1393	Groton,	895	Orange,	1007	Troy,	1008
Brighton,	193	Guildhall,	501	Orwell,	1470	Tunbridge,	1786
Bristol,	1344	Guilford,	1389	Panton,	559	Underhill,	1599
Brookfield,	1672	Halifax,	1133	Pawlet,	1843	Vergennes,	1878
Brookline,	285	Hancock,	430	Peacham,	1877	Vernon,	821
Brownington,	613	Hardwick,	1402	Peru,	567	Vershire,	1071
Brunswick,	119	Harris' Gore,	8	Pittsfield,	512	Victory,	168
Burke,	1103	Hartford,	2169	Pittsford,	2026	Waitsfield,	1021
Burling- (vil. 6110)	7585	Hartland,	2063	Plainfield,	808	Walden,	910
ton, (town, 1475)		Highgate,	2653	Plymouth,	1226	Wallingford,	1688
Cabot,	1356	Hinesburgh	1834	Pomfret,	1546	Waltham,	270
Calais,	1410	Holland,	669	Poultney,	2329	Wardsborough,	1125
Cambridge,	1849	Hubbardton,	701	Pownal,	1742	Warren,	962
Canaan,	471	Huntington,	885	Putney,	1425	Washington,	1848
Castleton,	3016	Hydepark,	1107	Randolph,	2666	Waterbury,	2352
Cavendish,	1576	Ira,	400	Reading,	1171	Waterford,	1412
Charleston,	1008	Irasburgh,	1034	Readsborough,	857	Waterville,	753
Charlotte,	1634	Isle la Motte,	476	Richford,	1074	Weathersfield,	1851
Chelsea,	1958	Jamaica,	1606	Richmond,	1453	Wells,	804
Chester,	2185	Jay,	371	Ripton,	567	Wenlock,	26
Chittenden,	675	Jericho,	1837	Rochester,	1492	West Fairlee,	696
Clarendon,	1477	Johnson,	1381	Rockingham,	2837	Westfield,	502
Colchester,	2575	Kirby,	509	Roxbury,	967	Westford,	1458
Concord,	1153	Landgrove,	337	Royalton,	1850	Westhaven,	718
Corinth,	1906	Leicester,	596	Rupert,	1101	Westminster,	1721
Cornwall,	1155	Lemington,	187	Rutland,	3715	Westmore,	152
Coventry,	867	Lewis,	0	Ryegate,	1606	Weston,	950
Craftsbury,	1223	Lincoln,	1057	St. Albans,	3567	West Windsor,	1002
Danby,	1535	Londonderry,	1274	St. George,	127	Weybridge,	804
Danville,	2577	Lowell,	637	St. Johnsbury,	2758	Wheelock,	855
Derby,	1750	Ludlow,	1619	Salem,	455	Whiting,	629
Dorset,	1700	Lunenburg,	1123	Salisbury,	1027	Whitingham,	1380
Dover,	709	Lyndon,	1752	Sandgate,	850	Williamstown,	1452
Dummerston,	1645	Maidstone,	237	Searsburgh,	201	Williston,	1669
Duxbury,	845	Manchester,	1782	Shaftsbury,	1896	Wilmington,	1872
East Haven,	94	Marlborough,	896	Sharon,	1240	Windham,	763
Eden,	668	Marshfield,	1102	Sheffield,	797	Windsor,	1928
Elmore,	504	Mendon,	504	Shelburne,	1257	Winhall,	762
Enosburgh,	2009	Middlebury,	3517	Sheldon,	1814	Wolcott,	909
Essex,	2052	Middlesex,	1365	Sherburne,	578	Woodbury,	1070
Fairfax,	2111	Middletow ,	875	Shoreham,	1601	Woodford,	423
Fairfield,	2591	Milton,	2451	Shrewsbury,	1268	Woodstock,	8041
Fair Haven,	902	Monkton,	1246	Somerset,	321	Worcester,	702

NOTE.—Montpelier and Windsor have each been divided into two towns, since the sixth census, and the town of Mansfield has been swallowed up by annexation to Stow. All these changes were made at the session of the legislature, in 1848.

POPULATION BY COUNTIES. LITERARY INSTITUTIONS. PRODUCTIONS OF AGRICULTURE.

POPULATION BY COUNTIES.	
Counties.	Population.
Addison, - - - - -	26,549
Bennington, - - - - -	18,589
Caledonia, - - - - -	23,595
Chittenden, - - - - -	29,086
Essex, - - - - -	4,650
Franklin, - - - - -	28,586
Grand Isle, - - - - -	4,145
Lamoille, - - - - -	10,872
Orange, - - - - -	27,296
Orleans, - - - - -	15,707
Rutland, - - - - -	38,059
Washington, - - - - -	24,654
Windham, - - - - -	29,082
Windsor, - - - - -	38,504
Total aggregate, - - - -	314,304
White Males, - - - - -	159,748
White Females, - - - - -	153,838
Total Whites, - - - - -	313,586
Colored Males, - - - - -	375
Colored Females, - - - - -	348
Total Colored, - - - - -	718
Total aggregate, as before, -	314,304

LITERARY INSTITUTIONS.

	No. Teachers.	Pupils.
Colleges, - - - - -	5*	80
Public Schools, - - - - -	2789	4,204
Academies and Private Schools, - - - - -	95	272
		6,231

LIBRARIES.

Public, (including School) 77	48,705
Private, - - - - - 133	55,773

NOTE.—In most of the counties no private libraries were reported which contained less than 1,000 volumes.

NEWSPAPERS.

Whole No. 36. Whig, 14; Democratic, 7; Literary, &c., 15.

	No. Circulation.	Ann. Issues.
Daily, - - - - - 2	550	171,050
Semi-Weekly, 1	2,200	228,800
Weekly, - - - - - 81	41,206	2,142,712
Monthly, - - - - - 2	2,000	24,000
	86	2,566,562

* Two of them Medical Colleges.

NOTE.—By comparing the numbers in the above table with the returns of 1840, given in Part I., p. 52-57, it will be seen that, while the number of horses and cattle has remained nearly the same, there has been a very great diminution of the number of hogs and sheep. The number of sheep returned shows a diminution of more than 600,000.

PRODUCTIONS OF AGRICULTURE IN VERMONT, SEVENTH CENSUS—1850.

COUNTIES.	Area of Land in Farms. Improved.	Unimproved.	Cash Value of Farms.	Value of Farm Implements.	Horses.	Asses and Mules.	Milk Cows.	Working Oxen.	Other Cattle.	Sheep.	Swine.	Value of Live Stock.
Addison, - - - - -	243,812	115,287	\$7,793,257	\$256,270	5,921	1	10,691	2,815	18,248	168,154	5,822	\$1,283,608
Bennington, - - - - -	138,055	85,760	8,338,756	131,194	8,344		6,667	1,988	7,402	71,294	5,102	682,281
Caledonia, - - - - -	210,474	151,607	4,751,000	319,559	5,705	11	11,014	4,402	12,529	80,252	2,864	1,027,880
Chittenden, - - - - -	177,707	104,454	5,624,483	217,348	4,837	17	12,790	2,324	9,859	57,184	6,492	898,782
Essex, - - - - -	42,993	52,810	787,185	61,096	1,025		2,549	1,250	3,448	7,519	822	215,370
Franklin, - - - - -	180,842	127,002	4,284,070	215,418	5,806	94	16,217	3,807	14,830	58,509	5,418	942,252
Grand Isle, - - - - -	83,171	16,113	1,180,682	88,998	1,800		1,868	288	1,465	18,949	937	122,688
Lamoille, - - - - -	76,063	76,070	1,851,471	107,505	2,032	39	6,611	2,225	6,124	15,108	2,476	422,671
Orange, - - - - -	228,257	120,142	4,807,788	279,641	5,580	5	10,777	5,188	13,584	71,551	7,337	974,258
Orleans, - - - - -	119,877	127,520	2,492,090	159,114	8,724	6	8,631	3,422	9,672	27,422	8,825	846,412
Rutland, - - - - -	290,892	154,524	7,972,180	255,240	6,151		17,151	3,590	12,677	186,811	5,034	1,543,986
Washington, - - - - -	165,654	120,236	3,965,985	165,179	4,146	13	11,597	3,922	11,190	32,855	5,507	878,755
Windham, - - - - -	819,558	99,674	6,301,500	248,874	6,054		13,977	6,081	17,744	58,558	6,005	1,223,724
Windsor, - - - - -	877,528	174,711	8,221,815	292,850	6,785	29	16,918	7,081	20,421	190,808	8,600	1,890,780
Total, - - - - -	2,631,400	1,524,418	\$948,807,327	\$2,783,262	61,657	218	116,124	49,577	164,149	1,013,122	101,260	\$12,643,228

PRODUCE OF THE YEAR ENDING JUNE 1, 1850.

SEVENTH CENSUS.

PRODUCE OF THE YEAR ENDING JUNE 1, 1850.

COUNTIES.	Wheat, Bushels.	Rye, Bushels.	Ind. Corn, Bushels.	Oats, Bushels.	Pens and Bes. Bu.	Potatoes, Bushels.	Barley, Bushels.	Wool, Pounds.
Addison,	103,434	20,096	175,478	211,385	26,355	318,421	149	622,594
Bennington,	6,973	17,270	160,920	177,611	3,150	200,013	3,003	221,679
Caledonia,	62,551	2,040	96,389	218,785	6,419	585,341	3,658	136,790
Chittenden,	38,431	25,566	198,598	184,752	10,330	383,113	682	185,215
Essex,	8,826	1,300	21,931	45,597	2,506	94,124	1,221	29,614
Franklin,	55,488	9,138	167,896	145,840	10,255	268,757	815	209,850
Grand Isle,	31,324	3,486	23,215	81,027	10,469	31,793	789	70,291
Lamoille,	14,466	6,663	66,017	90,434	4,351	278,252	629	49,053
Orange,	52,822	9,740	176,586	205,467	5,658	599,925	1,861	248,715
Orleans,	58,515	4,853	70,306	163,587	3,723	407,132	8,974	81,947
Rutland,	25,874	20,598	258,831	189,796	4,220	416,000	627	623,199
Washington,	80,580	10,667	133,477	208,554	4,954	446,551	865	153,843
Windham,	8,749	18,302	210,141	160,393	2,270	338,295	14,124	179,122
Windsor,	31,862	26,004	312,581	224,756	9,920	613,297	4,803	589,805
Aggregate,	535,900	176,233	2,032,396	2,307,734	104,649	4,951,014	42,150	3,400,717

PRODUCE OF THE YEAR ENDING JUNE 1, 1850.

COUNTIES.	Buckwheat, Bushels.	Orchard Fruit, Pounds.	Wine, Gals.	Produce Garden	Butter, Pounds.	Cheese, Pounds.	Hay, Tons.	O.S. Gr. Bush.	Beef Bushels.
Addison,	15,655	\$41,696	114	\$	876,771	817,149	88,793	5	1,589
Bennington,	22,797	16,629	7	1,558	502,786	538,494	54,600		622
Caledonia,	14,380	26,094	47	355	1,206,272	121,092	69,449	179	2,991
Chittenden,	10,003	33,841	303	10,913	838,481	1,663,456	57,407	2	619
Essex,	15,400	4,523			292,615	122,321	14,972	38	923
Franklin,	10,095	19,429		107	1,390,455	1,196,660	78,619		1,050
Grand Isle,	12,140	11,223		12	93,225	26,793	6,980	1	300
Lamoille,	10,373	9,095	94		487,110	213,035	26,978	9	587
Orange,	28,942	23,860		270	860,042	428,676	70,549	206	009
Orleans,	15,305	5,920			645,160	68,092	45,288	39	1,798
Rutland,	12,051	38,457	19	537	1,120,814	1,930,047	103,950	1	773
Washington,	10,135	20,630		1,475	970,368	437,476	54,569	37	767
Windham,	7,531	19,139	15	581	1,144,653	469,728	84,749	76	392
Windsor,	25,006	44,609	60	3,043	1,741,228	667,105	118,865	167	1,916
Aggregate,	209,819	315,255	659	18,853	12,137,080	8,720,634	866,163	700	14,986

PRODUCE OF THE YEAR ENDING JUNE 1, 1850.

COUNTIES.	Hops, Pounds.	Flax, Pounds.	Flax Seed, Bush.	Silk Co. Pounds.	Maple Sugar, Pounds.	Maple Gall's	Sugar, Hons.	Wax and Hon. lbs.	Ho. Man- ufac. Val.	And Val.	Slough- tered, Value.
Addison,	5,962	1,282	51	76	205,260	650	40,654	\$9,648		\$176,856	
Bennington,	193	2,522	132		220,009	165	14,814	6,450		86,128	
Caledonia,	1,422	2,365	133		854,820	364	22,863	40,843		135,587	
Chittenden,		968	26	4	242,842	70	18,319	13,359		134,536	
Essex,	28,250	855	11		145,041	129	3,855	22,044		37,020	
Franklin,	1,610	1,052	33		684,611	86	20,636	26,247		141,882	
Grand Isle,		531	8	30	32,665		4,866	3,449		19,967	
Lamoille,	15,657	1,293	41		427,918	23	11,501	6,584		80,296	
Orange,	23,827	3,752	158	15	532,156	674	12,485	27,846		160,430	
Orleans,	77,605	660	140		656,893		6,461	16,422		86,672	
Rutland,	162	986	22		492,664		37,370	13,620		184,251	
Washington,	12,125	2,730	31		765,429	407	17,299	17,269		155,477	
Windham,	41,510	518	10	1	470,334	1,360	7,255	18,321		189,096	
Windsor,	79,700	1,538	163	142	618,222	2,119	31,191	52,608		272,394	
Aggregate,	288,023	20,852	939	264	6,340,857	5,997	249,422	267,710		1,861,886	

*By comparing the amount of Maple Sugar here given, with amount made in 1840, as stated in Part I, page 210, it will be seen that the advance in the annual manufacture of this article, amounts to 1,701,423 pounds. There has also been a very great improvement in the quality of the sugar made, as well as increase in quantity. Two prize Medals were awarded at the World's Fair, in London, in 1851, for Vermont Sugar, one to Mr. L. Dean, of Manchester, and the other to Mr. W. Barnes, of Rutland.

PRODUCTIONS OF INDUSTRY. REAL AND PERSONAL ESTATE. TAXES. WAGES. PAUPERISM.

PRODUCTIONS OF INDUSTRY IN THE YEAR ENDING JUNE 1, 1850.

COUNTIES.	No. of Estab.	Capital Invested.	Value of raw Material	No. of Hands.		Monthly Wages.		Value of Ann. Prod.
				Male.	Fema.	Male.	Female.	
Addison,	161	\$289,375	\$360,069	523	74	\$12,143	\$ 704	\$659,888
Bennington,	150	468,050	414,622	652	117	15,187	1,077	880,216
Caledonia,	243	444,180	399,427	742	74	18,688	869	799,053
Chittenden,	202	771,610	700,192	848	368	19,211	3,121	1,320,780
Essex,	82	81,250	23,589	55		1,235		48,794
Franklin,	112	147,710	126,879	364	30	7,138	247	285,697
Grand Isle,	9	13,100	1,790	47		675		15,600
Lamoille,	45	110,300	93,108	115	31	2,909	421	175,861
Orange,	85	171,045	110,774	226	27	5,122	244	219,165
Orleans,	68	64,450	60,148	116	9	2,188	73	119,036
Rutland,	276	828,975	490,507	1,280	99	30,703	957	1,284,756
Washington,	77	281,387	223,705	875	74	9,656	784	525,236
Windsor,	196	476,720	399,933	649	273	15,345	3,601	831,209
Windham,	198	953,275	767,809	902	375	25,976	5,365	1,405,729
Aggregate,	1,849	5,001,877	4,172,552	6,894	1,551	166,066	17,463	8,570,920

REAL AND PERSONAL ESTATE IN VERMONT.

Valuation of Real and Personal Estate, by Assessors,	-	-	-	\$71,671,651
Estimated true value of Real and Personal Estate,	-	-	-	92,205,049

TAXES.

General State Tax,	-	-	-	-	-	-	-	\$188,533
School Tax,	-	-	-	-	-	-	-	88,930
Poor Tax,	-	-	-	-	-	-	-	90,809
County, Town, &c., Taxes,	-	-	-	-	-	-	-	401,142
Total,	-	-	-	-	-	-	-	\$719,414

WAGES.

Average Monthly Wages of a Farm Hand,	-	-	-	-	-	\$13,00
“ to a Day Laborer, with Board,	-	-	-	-	-	0,72
“ to a Day Laborer, without Board,	-	-	-	-	-	0,97
“ Day Wages to a Carpenter, without Board,	-	-	-	-	-	1,44
Weekly Wages to a Female Domestic, with Board,	-	-	-	-	-	1,19
Price of Board to Laboring Men,	-	-	-	-	-	1,95

PAUPERISM.

	Native.	Foreign.	Total.
Whole No. of Paupers within the year ending June 1, 1850,	- 2043	1611	3654
Whole No. of Paupers on June 1, 1850,	- 1565	314	1879

CRIME.

	Native.	Foreign.	Total.
Whole No. of Criminals convicted within the year ending June 1, 1850,	- 34	45	79
Whole No. in Prison on June 1, 1850,	- 64	41	105

RAIL ROADS IN VERMONT.

At the time of the publication of our History of Vermont in 1842, we had neither canals nor rail roads within the state; but we ventured the opinion, (Part I, page 217) that Boston would in time be connected with Lake Champlain by a continuation of the Lowell and Concord rail road. At that time we little thought that the short period of ten years would witness the completion of a net-work of rail road over the whole country. Ten years ago the construction of a railway across the Green Mountains from the valley of the Connecticut to Lake Champlain, was very generally regarded as a chimerical notion, which would never be realized, and they who entertained it were looked upon as visionaries. But events have proved it otherwise. We have already two rail roads crossing the state from east to west, connecting these vallies; and, also a road in each of these vallies running north and south, through

RAIL ROADS IN VERMONT.

MAGNETIC TELEGRAPH.

nearly the entire length of the state.
The first rail road commenced in this state was the Vermont Central, and the ground was first broken for the construction of that road in the spring of 1846 at Windsor. The Rutland and Burlington road was commenced in the spring of 1847,

and both of these roads were opened from Connecticut river to Burlington in December, 1849.
The following table exhibits the names, the terminations, the lengths, and the times of opening the several rail roads, in operation in April, 1853.

NAMES.	TERMINATIONS.		LENGTH.	OPENED.
Atlantic and St. Lawrence,*	Bloomfield,	Norton,	34	1853
Conn. and Passumpsic Rivers,	White River,	St. Johnsbury,	61	1851
Rutland and Burlington,	Burlington,	Bellows Falls,	119	1849
Rutland and Washington,	Rutland,	Poultney,	18	1852
Rutland and Whitehall,	Castleton,	Whitehall,	12	1850
Vermont Central,	Burlington,	Windsor,	117	1849
Vermont and Canada,	Essex Junction,	Rouse's Point,	47	1850
Vermont and Massachusetts,	Brattleborough,	South Vernon,	10	1849
Vermont Valley,	Bellows Falls,	Brattleborough,	24	1851
Western Vermont,	Rutland,	N. Bennington,	51	1852
			498	

Several others are in contemplation within the state, and no great length of time will probably elapse before the Connecticut and Passumpsic Rivers road will be continued northward from St. Johnsbury to Canada Line. The effects which these roads have produced upon the towns through and near which they pass, are marked and ob-

vious, but I have not room to particularize them.
*This is a section of the rail way designed to connect Portland, Me., with Montreal, C. E. It is now opened (April, 1853,) from Portland to Island Pond in Brighton and from Montreal to Sherbrooke. The intermediate portion from Sherbrooke to Island Pond is nearly ready for the rails and is expected to be opened in the course of a few months. The length here given is only an estimate from the Map.

MAGNETIC TELEGRAPH.

The Magnetic Telegraph, which seems to be essential to the safe management of rail roads, sprang into being very soon after the time when railroads themselves had their origin; and they were introduced simultaneously into Vermont. The first line of telegraph in Vermont, forms a part of the *Troy and Canada Junction Line*, and was commenced in 1847. It was opened for communication, from Troy to Burlington, on the 2d of Feb. 1848, and was soon after carried through to Montreal. This line enters the state at Bennington, passes thro' Manchester, Rutland, Castleton, Whitehall, Orwell, Brandon, Middlebury, Vergennes, Burlington and St. Albans, and leaves the state at Highgate. The length of this line, within the state, is 200 miles.
The Northern Telegraph Line connects Boston with Rutland. Proceeding from Boston by way of Fitchburg and Keene it enters the state at Bellows Falls and follows the line of the Rutland and Burlington rail road through Chester and Ludlow to Rutland. Length within the state 50 miles.

Vermont and Boston Telegraph Line.—Proceeding from Boston by way of Lowell and Concord, this line enters the state at White River Junction, and, after going to Woodstock and back, 20 miles, follows the line of the Central rail road, passing thro'

South Royalton, West Randolph, Northfield Montpelier, Waterbury, and Essex Junction to Burlington. From Burlington it follows the Vermont and Canada rail road through St. Albans and Swanton to Rouse's Point, where it leaves the state, and proceeds in two branches, one to Montreal and the other to Ogdensburgh. Connected with this line and crossing it at White River Junction, the same company have a line along the valley of the Connecticut, reaching from St. Johnsbury to Springfield, Mass. From St. Johnsbury it follows the rail road, through Newbury and Bradford to Norwich, where it crosses over to Hanover and back, and then proceeds down to White River Junction. From the Junction it proceeds to Windsor, crosses over to Claremont, N. H., then back to Weathersfield Bow, thence to Springfield—then by way of Charlestown bridge to Charlestown, and down the Sullivan rail road to Bellows Falls. From Bellows Falls it proceeds down the Connecticut on the Vermont side thro' Brattleborough into Massachusetts. The whole length of telegraph line belonging to this company is about 700 miles, of which more than 300 are in Vermont. The whole length of telegraph wire in the state is little less than 600 miles, and the cost of building, including appurtenances and patent privileges has been about \$215 per mile.

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ERRATA.

Several typographical and other errors having been observed, in different parts of our work, we shall here correct such as would be likely to mislead the reader. These errors have mostly occurred in the Catalogue of Plants, in consequence of some additions made to the manuscript after it left the hands of the author, and of our being obliged to commence working it off before proof-sheets were returned with the author's corrections. These proofs were however received in season to correct most of the errors in our list, in the greater part of the edition.

Page	PART I.
4,	Note, line 8, for 1763 read 1768.
58,	For <i>Larus atricilla</i> , Black headed Gull, read <i>L. argentatus</i> , Herring Gull.
164 & 166,	The cuts should change places.
174,	Erase <i>Equisetum variegatum</i> and Golden Corydalis, and transpose the last four lines.
175,	For <i>Eragrostis</i> read <i>Erogrostis</i> ; for <i>Polanisia</i> read <i>Polonisia</i> .
177,	For <i>Monocotyledonous</i> read <i>Dicotyledonous</i> . [Note. The name of this Class was left blank in Mr. Oakes' Ms. and the blank filled by referring to Dr. Torrey's Cat. of N. Y. plants in the Report for 1840, and the error in that Cat. was not observed until a part of our sheets were worked off.] Ten lines below, for p. 18 read p. 182.
179,	For <i>Dentaria laciniata</i> read <i>D. laciniata</i> .
180,	For <i>verticillata</i> read <i>verticillata</i> .
181,	For <i>Cerastium vulgatum</i> read <i>C. viscosum</i> . For <i>Xanthoxylum traxineum</i> read <i>X. fraxineum</i> . Erase the sentence in parenthesis 3d and 4th line from top, and <i>Geranium dissectum</i> .
183,	For <i>Robinsii</i> read <i>Robbinsii</i> ; for <i>aspedeza</i> read <i>Lespedeza</i> .
185,	Erase <i>Ribes floridum</i> .
186,	Erase <i>Burlington</i> , <i>Macrae</i> , 4th line.
187,	Erase <i>L.</i> after <i>Nardosmia</i> , <i>Cass</i> ; also <i>A pubescent</i> var. &c. line 25.
189,	For <i>Cardus</i> read <i>Carduus</i> . <i>Sonchus</i> , var. <i>spinulosus</i> , for <i>E. H.</i> read <i>E. F.</i> , and for <i>achenia</i> read <i>achenia</i> .
191,	Erase <i>Asclepias debilis</i> .
193,	For <i>Mentha Piperita</i> read <i>M. piperita</i> .
194,	<i>Orehanche Americana</i> ; erase <i>Sharpshin Point</i> , <i>Burlington</i> , <i>Macrae</i> .

Page	PART I.
195,	For Order <i>Phytolaceæ</i> read <i>Phytolaccaceæ</i> .
199,	<i>Liparis</i> -for <i>Malaxis lorreana</i> read <i>M. correaana</i> .
205,	Erase <i>Nichx.</i> after <i>Trisetum striatum</i> .
206,	Add <i>Equisetum arvense</i> , <i>L.</i> Moist fields, pastures, &c
The following species should have the character & denoting that they have been introduced and naturalized, inserted before them.	
179,	<i>Barbarea vulgaris</i> .
181,	<i>Agrostemma Githago</i> ; <i>Portulaca oleracea</i> .
182,	<i>Sida Abutilon</i> ; <i>Vicia sativa</i> ; <i>Vicia Cracca</i> .
183,	<i>Melilotus officinalis</i> .
188,	<i>Inula Helenium</i> ; <i>Xanthium strumarium</i> .
189,	<i>Anthemis Cotula</i> ; <i>Chrysanthemum</i> ; <i>Leucanthemum</i> ; <i>Arctium Lappa</i> ; <i>Leontodon Taraxacum</i> ; <i>Sonchus oleraceus</i> <i>Amaranthus Blitum</i> .
Some errors have also occurred in the use of capitals, in punctuation, and in writing the diphthongs, which are not here particularized.	

Page	PART II.
32,	Column 2d, near the middle, for <i>Dutchman</i> read <i>Dr. Adams</i> .
209,	In our table of population, the town of <i>Lowell</i> was omitted. The census of this town in 1791 was 0; 1800, 0; 1810, 40; 1820, 139; 1830, 314; 1840, 431.

Page	PART III.
62,	26th line from bottom, for <i>Peninan</i> read <i>Pen-niman</i> .
89,	Highgate bounded west by <i>Misere</i> river.
91,	Uog Island belongs wholly to <i>Swanton</i> .

